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KALAT – QUETTA – CHAMAN ROAD PROJECT (SECTION 2 & 4) NATIONAL HIGHWAY (N-25)

MONTHLY PROGRESS REPORT
November, 2014

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SUMMARY

At the end of November, 2014, the status of the project was as follows:

Khad Kocha Quetta - Section 2 (length 54 km)

The progress remained slow during the reporting period. Construction of some of the road components were completed by FWO. Asphaltic concrete base course (ACBC) was completed up to 87% and Asphaltic concrete for wearing course (ACWC) was completed up to 74%.

Culverts construction was in progress at many locations. Physical progress on construction of Box culverts and Pipe culverts were 19% and 44% respectively. Construction of retaining walls was also in progress at various locations and 96% works were completed.

Jangle Piralizai Chaman - Section 4 (length 57 km)

Construction of some of the road components were completed by FWO and work on other components were going in full pace intermittently almost all along the sections of the project.

Asphaltic concrete base course (ACBC) was completed up to 48% and Asphaltic concrete for wearing course (ACWC) was completed up to 36%.

Culverts construction was in progress at many locations. Physical progress on construction of Box culverts and Pipe culverts were 38% and 75% respectively. Construction of retaining walls was also in progress at various locations and 56% works were completed.

Temporary traffic management signs were provided for directing & maintaining smooth traffic flow.

COMMENTS / ISSUES / ACTIONS NEEDED

- NHA and FWO need to consult pavement experts on the matter of laying of new Asphalt Concrete Wearing Course (ACWC) over the existing Asphaltic Base Course (ACBC) executed earlier by the previous contractors; the riding quality appeared to be wavy. Any necessary pre-treatment / rectification measures may be adopted.
- Khojak Pass area is snow bound and the road gradient is more than 4% at various locations. The matter was discussed with NHA and FWO for consideration.
- Construction work on 6 out of 15 causeways are in progress in Khojak pass area of Section-4 with revised (improved) design which has not been shared with AGES for review. The previous design seems to be inadequate with respect to its location topography.
- The course aggregates being used in sub base, base course and concrete are from the previously NHA approved sources of Kuchlak and Akhtar Abad. It is required that the quarry approval tests and other documents may be shared with AGES for verification and record.
- Fine aggregate source approval and relevant tests shall be shared by NHA with AGES for validation.
- At some locations of section 2 & 4 work on shoulders construction had not been started whereas the carriageway was completed up to Asphaltic Base Course (ACBC) level. The matter was discussed with FWO and it was pointed out that laying of shoulders should be performed soon after completion of the carriageway to avoid detrimental effect to the roadway.
- Pakistan Railways has not issued NOC for the level crossing to resolve ROW issue on Pringabad by Pass at section 2.
- R.O.W issue in a length of 1.75 Kms. (from Km.111+950 to Km113+700) is yet to be resolved in section 4.
- Design/drawings of bridge at KM 79+500 be finalized and shared with AGES for validation.
- Profile drawings of sub-section 11 and 12 of Jangle Piralizai – Chaman road have been shared with AGES. Plan, sections and structures design and drawings are yet to be shared for review and validation.
- Regular monthly coordination meeting was not held during the month, among the stake holders. Only two meetings have been convened since AGES mobilization in August 2014.
- New sets of drawings incorporating the comments of M&E consultants duly approved by NHA need to be separately compiled for the Balance / Leftover Works and copies shared with stake-holders for site implementation, supervision, and monitoring / verification purposes.

1 PROJECT BACKGROUND

N-25 road linking the port city of Karachi with the border town of Chaman is a vital route for providing sub regional connectivity and facilitation of cross border trade between Pakistan, Afghanistan, Iran and Central Asian Republics. In March 2004, the Asian Development Bank (ADB) and the Government of Pakistan entered into a loan agreement to initiate the Balochistan Roads Development Sector Project (BRDSP), which included the rehabilitation of 16 provincial roads through the Provincial Communications & Works Department, and covered the widening and improvement the Kalat-Quetta-Chaman (KQC) road by the National Highway Authority (NHA). For effective execution of the project, KQC road was divided into four sections. Work on section 1 and 3 commenced in the year 2006 and was scheduled for completion in the year 2008 but eventually completed in November 2010. The remaining two sections 2 and 4 commenced in the year 2009 and were scheduled for completion in August 2010. Due to worst law & order situation and subsequent expiry of ADB loan sections 2 and 4 were suspended in August 2012.

NHA held negotiations with USAID office in Pakistan for provision of funding for the remaining as well as some essential additional works as funding from GoP was not readily available. Expanding its portfolio in assisting the people and Government of Pakistan, USAID pledged to provide funding for the rehabilitation and repair of National Highways in Pakistan. Accordingly, an Activity Agreement (No. 391-016-DOD) was signed on October 11, 2013 between USAID and NHA wherein US\$ 90 million were allocated for Strengthening and Improvement of Kalat – Quetta – Chaman (KQC) section of National Highway (N-25) in Balochistan.

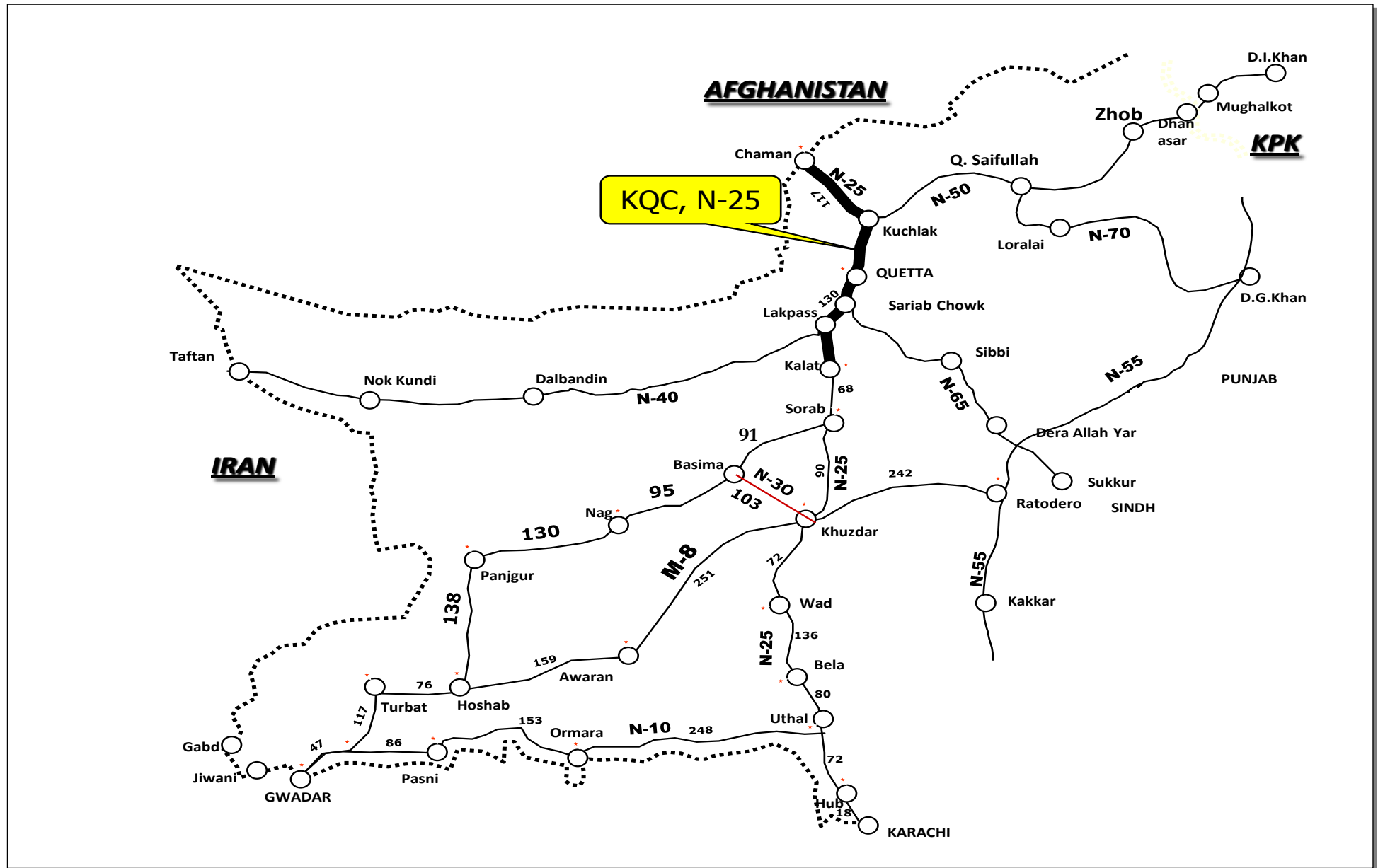
In consultation with EAD of the Ministry of Finance and NHA, USAID determined FWO as the appropriate construction contractor for this project because FWO had been an excellent performer in high risk areas of Pakistan and fully capable of completing the construction/ rehabilitation of the Kalat -Quetta - Chaman Road. This decision was based upon the unique capabilities that permit FWO to operate in high treat / high security areas including its ability to utilize Pakistani Military unit(s) to provide security around its construction projects.

NHA accordingly assigned construction contract for the balance / leftover works in sections 2 and 4 to M/s Frontier Works Organization (FWO) on EPC Lump sum basis in March 2014, for which formal contract agreement between NHA and FWO was signed on June 02, 2014. FWO has to complete the works within 18 months.

Of the overall agreed amount of US\$ 90 million, USAID on May 12, 2014 issued a Project Implementation Letter (PIL) No. 391-016-DOD-PIL-01 allocating US\$ 63.79 million for the balance / leftover works. The expiry date of the PIL is December 31, 2015.

1.1 Location

The project area falls in five districts namely Kalat, Mastung, Quetta, Pishin and Qila Abdullah of the central and northern Balochistan Province. The KQC Road portion of the N-25 originates at Kalat city, traverses through the provincial capital Quetta and ends at Pakistan – Afghanistan border at Chaman.



1.2 Implementation Arrangements

The Economic Affairs Division (EAD) along with NHA will establish a Project Steering Committee (PSC) to provide oversight and guidance, and approvals required for smooth and timely implementation of the project activities. The PSC will be chaired by EAD and will comprise representatives of USAID/Pakistan, NHA and FWO involved in the planning and execution of the project activities.

Under the overall direction and responsibility of NHA, the PSC will authorize the establishment of a Project Management Unit (PMU). The PMU will act as the secretariat for the Steering Committee, reporting on all aspects of Project implementations, including financial management.

NHA has accordingly established the PMU working under Project Director (PD NHA), having the authority to carry out the works to be financed under this FAR Agreement. Accordingly, PMU is fully responsible for carrying out these works or for contracting for the performance of these works, for supervising the construction contractor, and for ensuring that the contractor diligently undertakes the work and provide the necessary equipment, skilled and unskilled labor, and efficient supply of materials to ensure uniform and continuous progress.

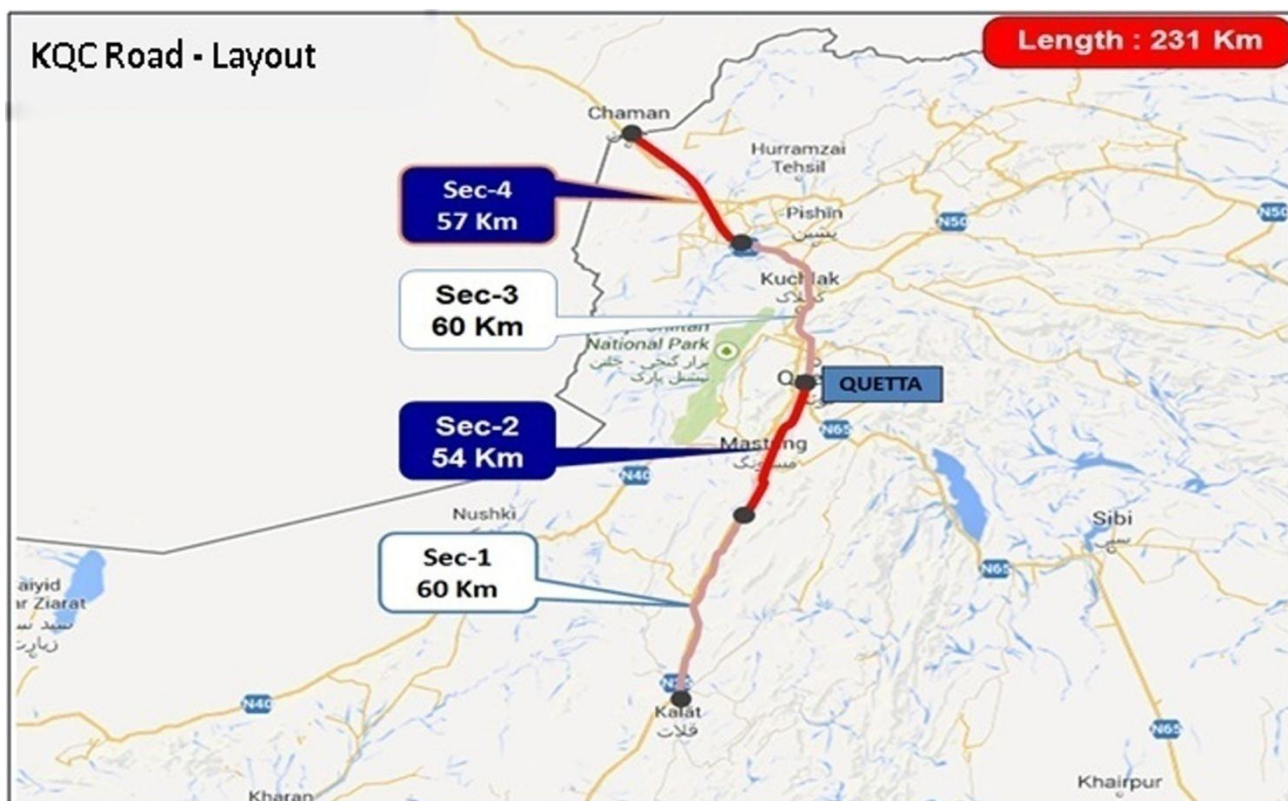
Kalat-Quetta-Chaman Road (N-25) is an EPC (Engineer, Procure & Construct) form of contract. FWO is fully responsible for the design and construction of the project in conformity with specifications and standard engineering practices. Engineering General Consultants (EGC) is providing design and quality control services to FWO.

USAID being the donor / funding agency of the KQC-RP has tasked AGES Consultants under Construction Monitoring and Evaluation Program (CMEP) to provide services for the construction monitoring, quality assurance, environmental compliance oversight, and payment certification for the satisfactorily completed milestones of the project on behalf of the USAID.

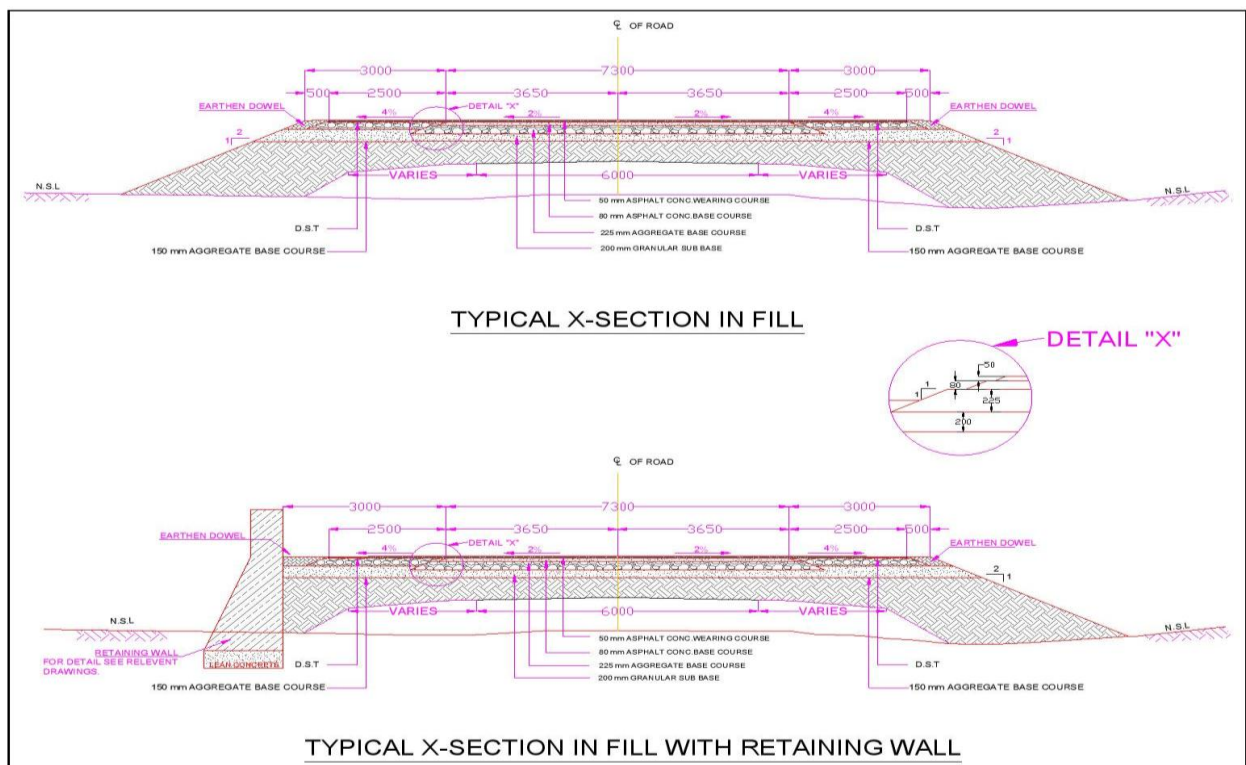
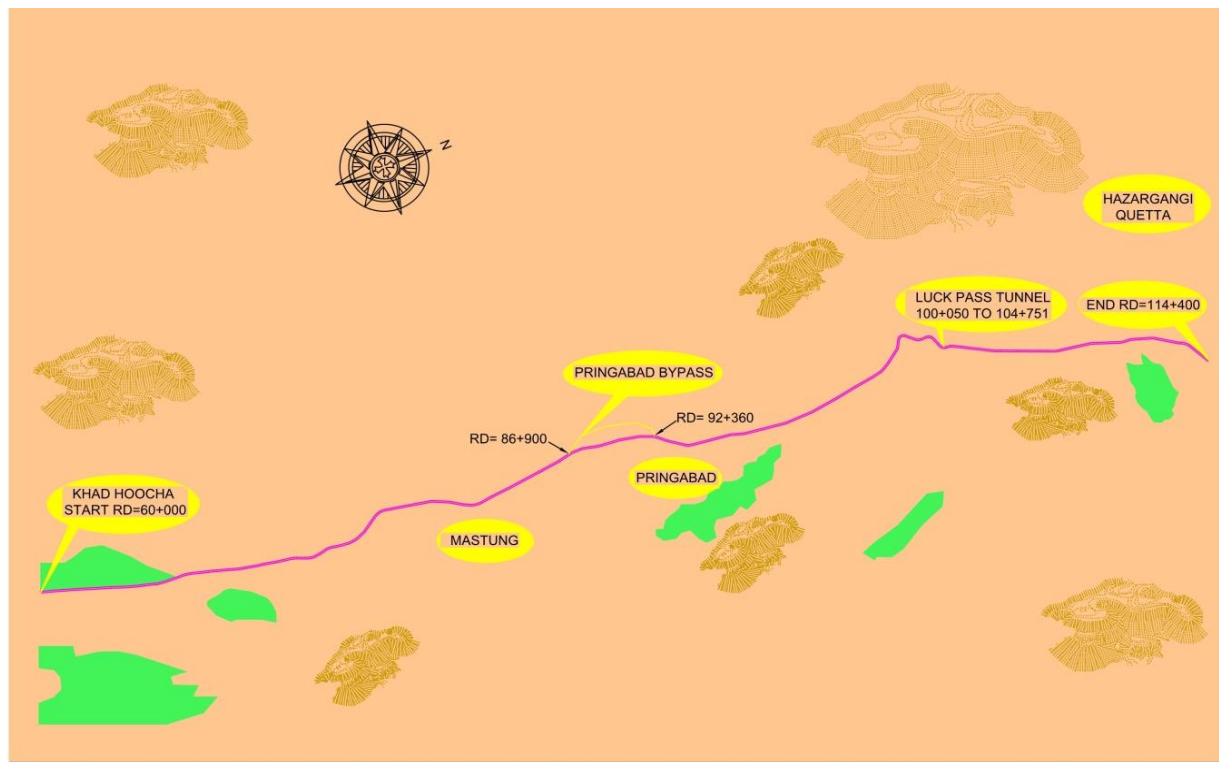
1.3 Scope of Work

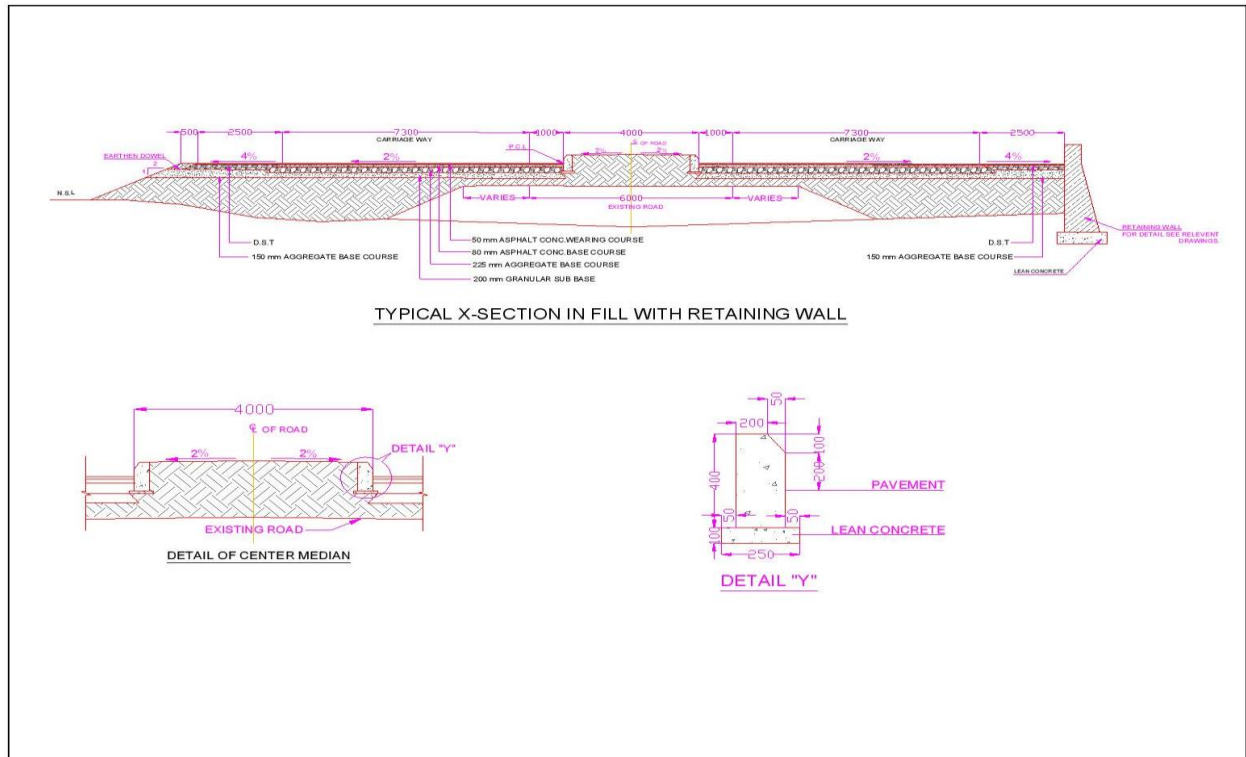
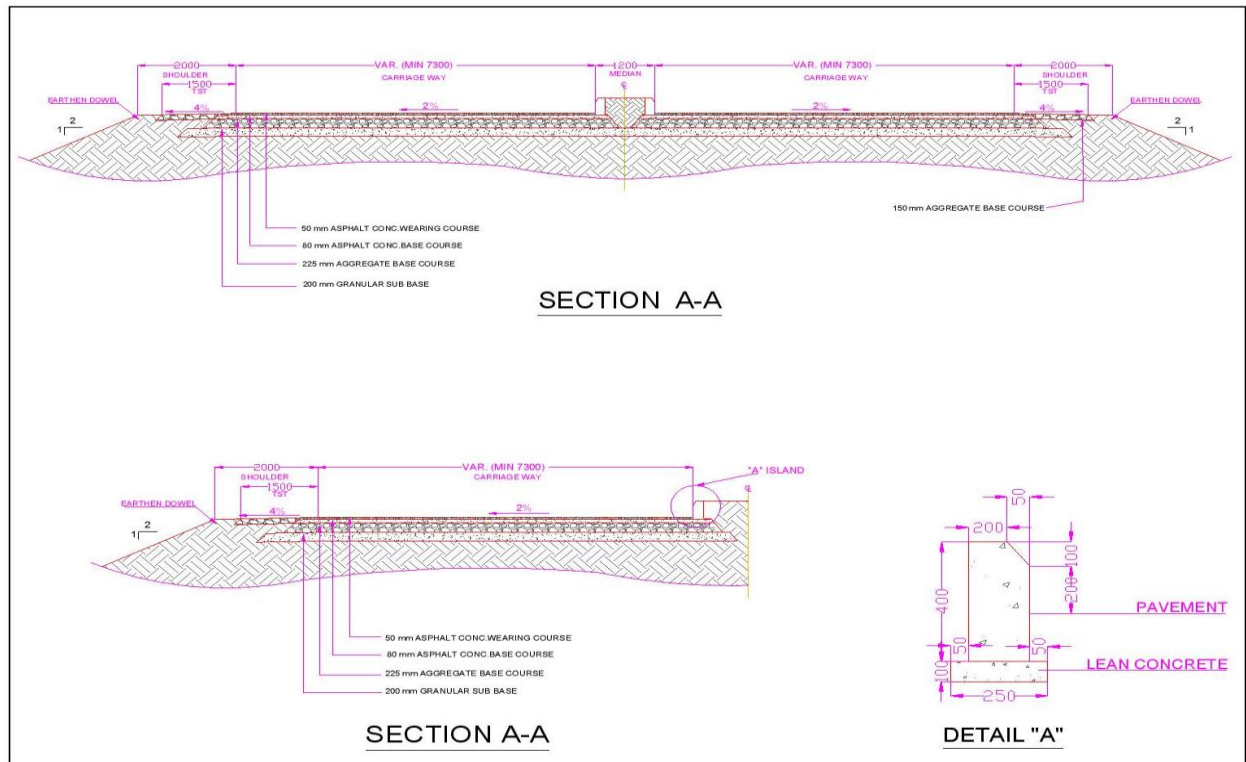
USAID has pledged to finance the remaining construction in sections 2 and 4, which covers 111 kilometers of the road. Scope of work include widening sections of the road, earthwork, grading and paving, as well as construction of four new bridges, drainage features and retaining structures. The expanded and improved road infrastructure will aid in increasing security and stability in the region, as well as facilitate improved communication, trade and national cohesion in the area. The improvements will also assist in providing local populations with greater economic opportunities, thereby reducing poverty and providing improved access to education, health-care services, markets, and other social services. The table below presents the status of Kalat-Quetta-Chaman road rehabilitation indicating the works to be financed by USAID under the Activity Agreement.

Status of Kalat-Quetta-Chaman Road Rehabilitation			
Section	Description	Length Km	Status
1	Kalat -Khad Kocha	60	Completed with ADB assistance
2	Khad Kocha– Quetta	54	Partially completed, to be completed with USAID financing under PILNo. 391-016-DOD-PIL-01.
3	Quetta - Jungle Piralizai	60	Completed with ADB assistance
4	Jungle Piralizai- Chaman	57	Partially completed, to be completed with USAID financing under PIL No. 391-016-DOD-PIL-01.
	Additional works	53	Not started; to be completed with USAID financing under a separate PIL.



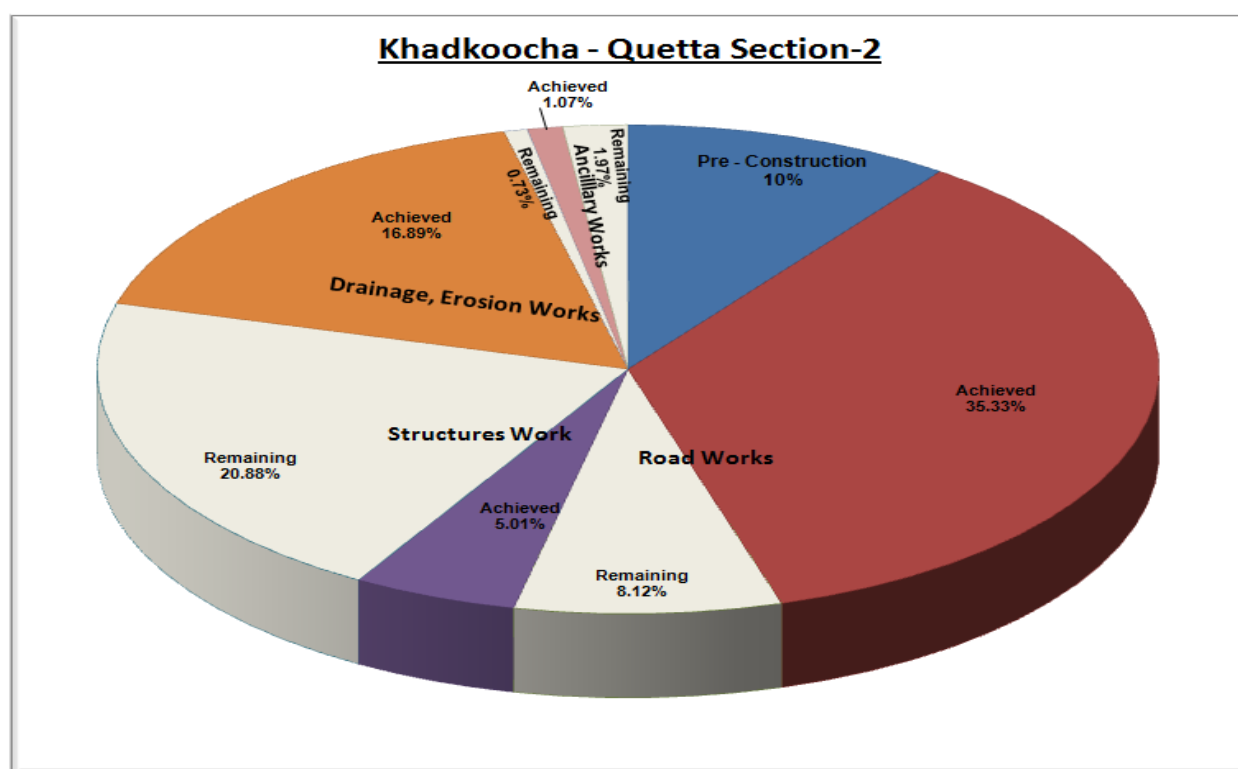
1.4 ALIGNMENT SKETCH – KHAD KOCHA – QUETTA (SECTION 2)





1.5 Physical Progress Section-2

Rehabilitation, Widening & improvement of National Highway (N – 25)						
Khadkoocha - Quetta Section-2						
Sub Section -1 To 08						
Km 60 + 000 to Km 114+ 400 (TOTAL LENGTH 49.7 KM)						
Progress as of November 30, 2014						
S.Nos	Description	SUB ACTIVITY COST (USD)	SUB ACTIVITY COST %	Achieved Progress		BALANCE
				Cost (USD)	Progress %	
1	PRE - CONSTRUCTION COST	2,211,924.10	10%	2,211,924.10	10%	-
2	ROAD WORKS	9,611,359.97	43.45%	7,814,869.18	35.33%	8.12%
3	STRUCTURES WORK	5,726,298.98	25.89%	1,108,144.68	5.01%	20.88%
4	DRAINAGE, EROSION WORKS	3,896,808.99	17.62%	3,736,075.42	16.89%	0.73%
5	ANCILLARY WORKS	672,858.95	3.042%	237,585.79	1.07%	1.97%
	TOTAL:	22,119,251.00	100%	15,108,599.18	68.31%	31.69%



Rehabilitation, Widening & improvement of National Highway (N – 25)

Khad koocha - Quetta Section- 2

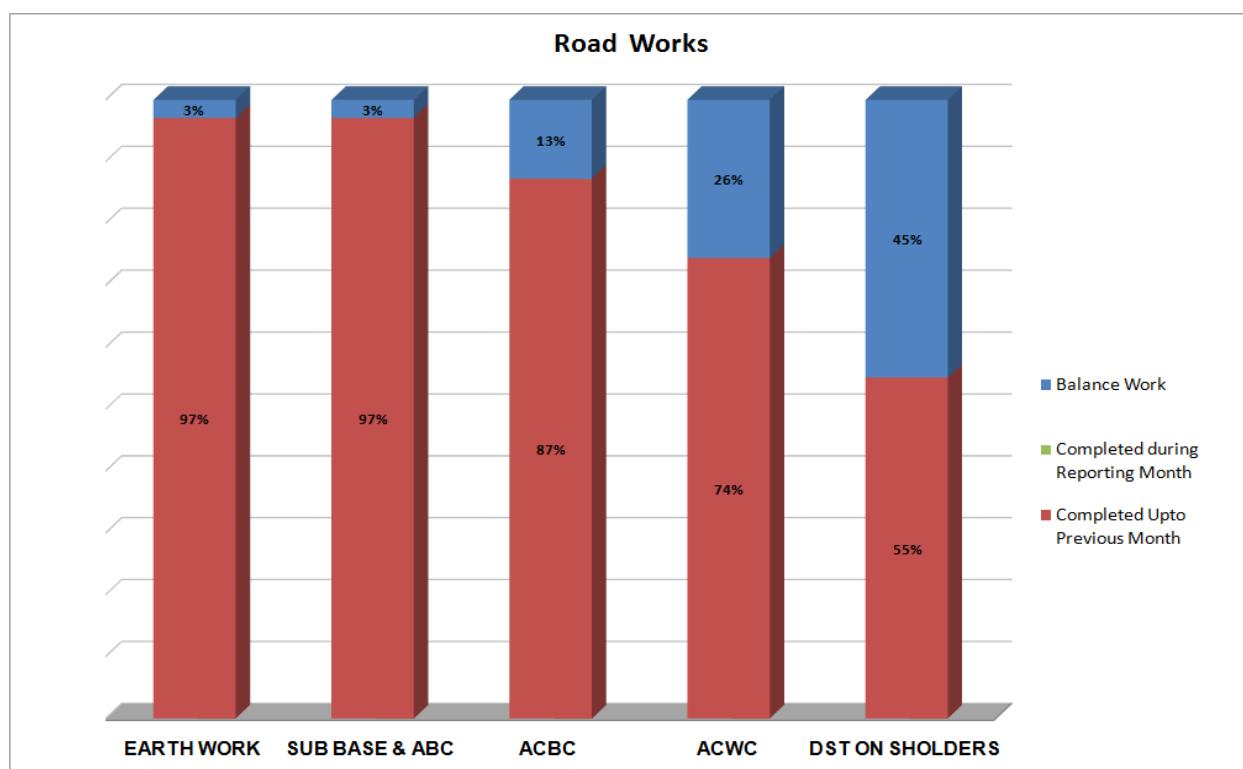
Sub Section -1 To 08

Km 60 + 000 to Km 114+ 400 (TOTAL LENGTH 49.7 KM)

Progress as of November30,2014

1 Milestone = 05

Progress as of November 06, 2014								Milestone = 00	
Item No	Description	TOTAL LENGTH (KM)	Cost / Km (USD)	Total Cost (USD)	Previous Month	Repoting Month	Accumulative		
					Km Wise Completed	Km Wise Completed	Km Wise Completed	Cost (USD)	Progress %
1: ROAD WORKS									
1.1	Earth Work & Scarification	49.7	17,729.44	881,153.00	48.25	0.00	48.25	855,445.31	97
1.2	Granular Sub Base & Aggregate base course	49.7	45,166.50	2,244,775.00	48.25	0.00	48.25	2,179,283.58	97
1.3	Asphaltic Base Course & Prime Coat	49.7	32,067.36	1,593,747.99	43.35	0.00	43.35	1,390,120.23	87
1.4	Tack Coat & Asphaltic Concrete for Wearing Course (Class-A)	49.7	72,207.95	3,588,735.00	37.00	0.00	37.00	2,671,694.06	74
1.5	DST ON Shoulder	49.7	26,216.28	1,302,948.99	27.40	0.00	27.40	718,326.00	55
				9,611,359.97				7,814,869.18	81



Rehabilitation, Widening & improvement of National Highway (N – 25)

Khad koocha - Quetta Section- 2

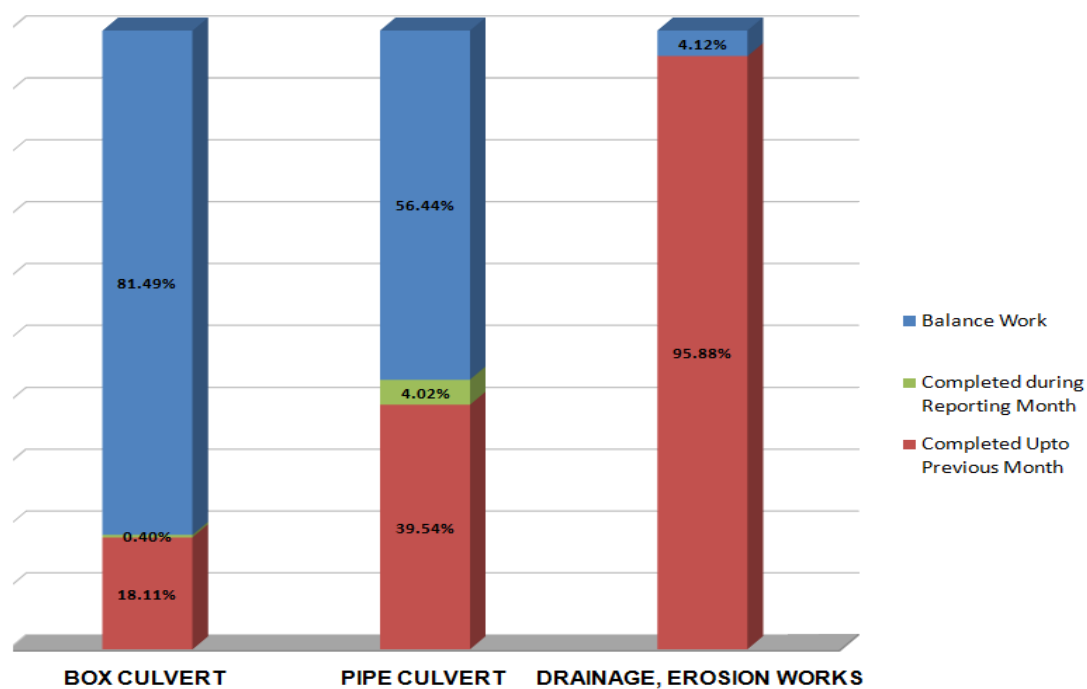
Sub Section -1 To 08

Km 60 + 000 to Km 114+ 400 (TOTAL LENGTH 49.7 KM)

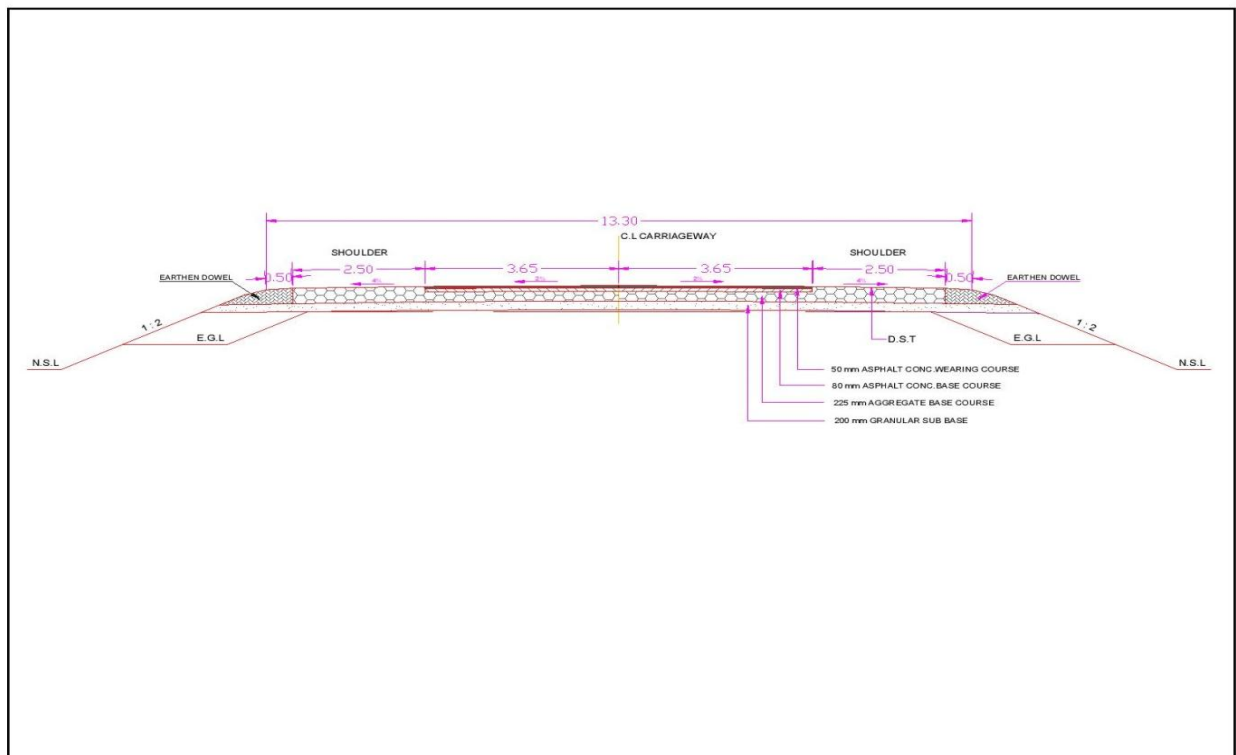
Progress as of November30,2014

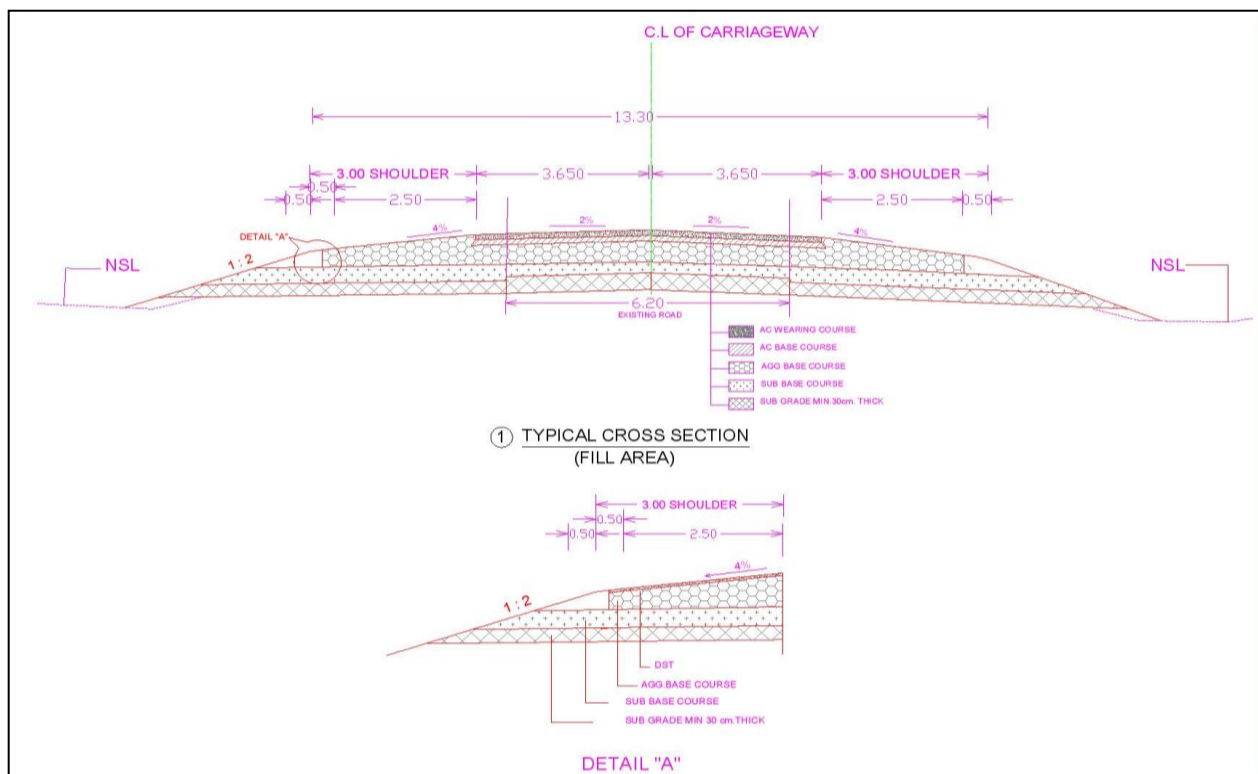
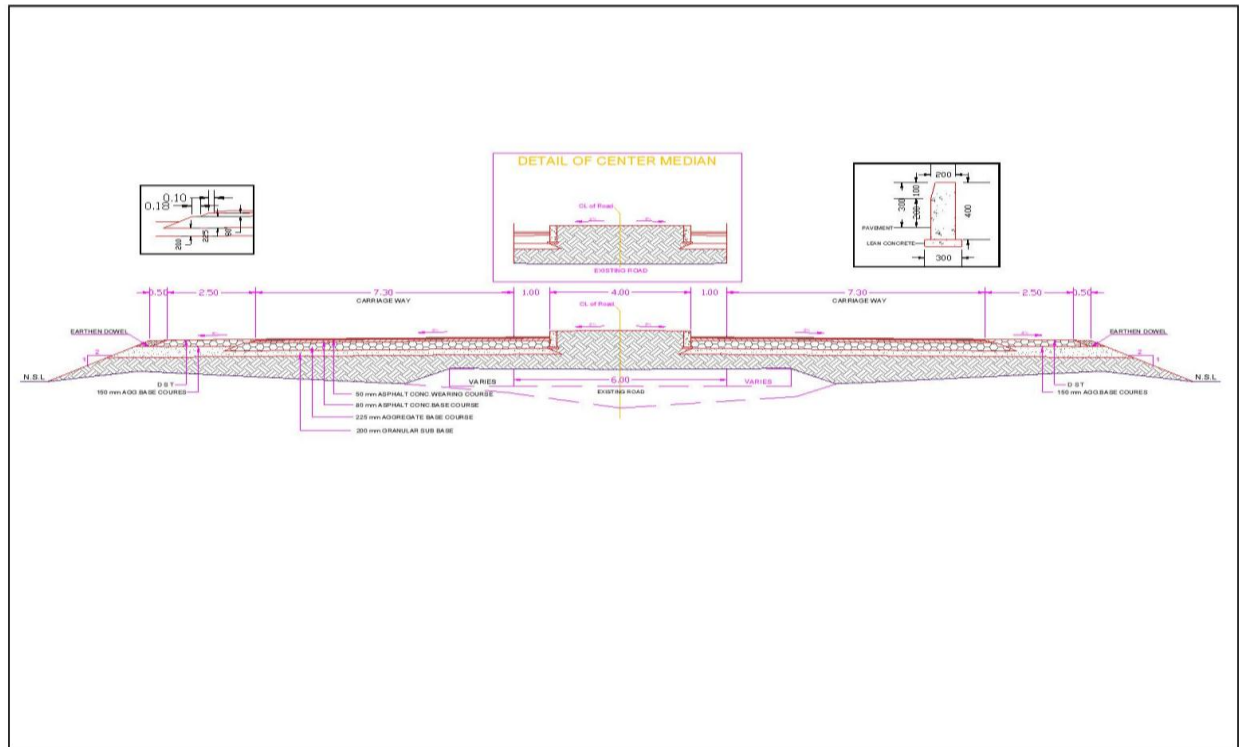
1 Milestone = 05

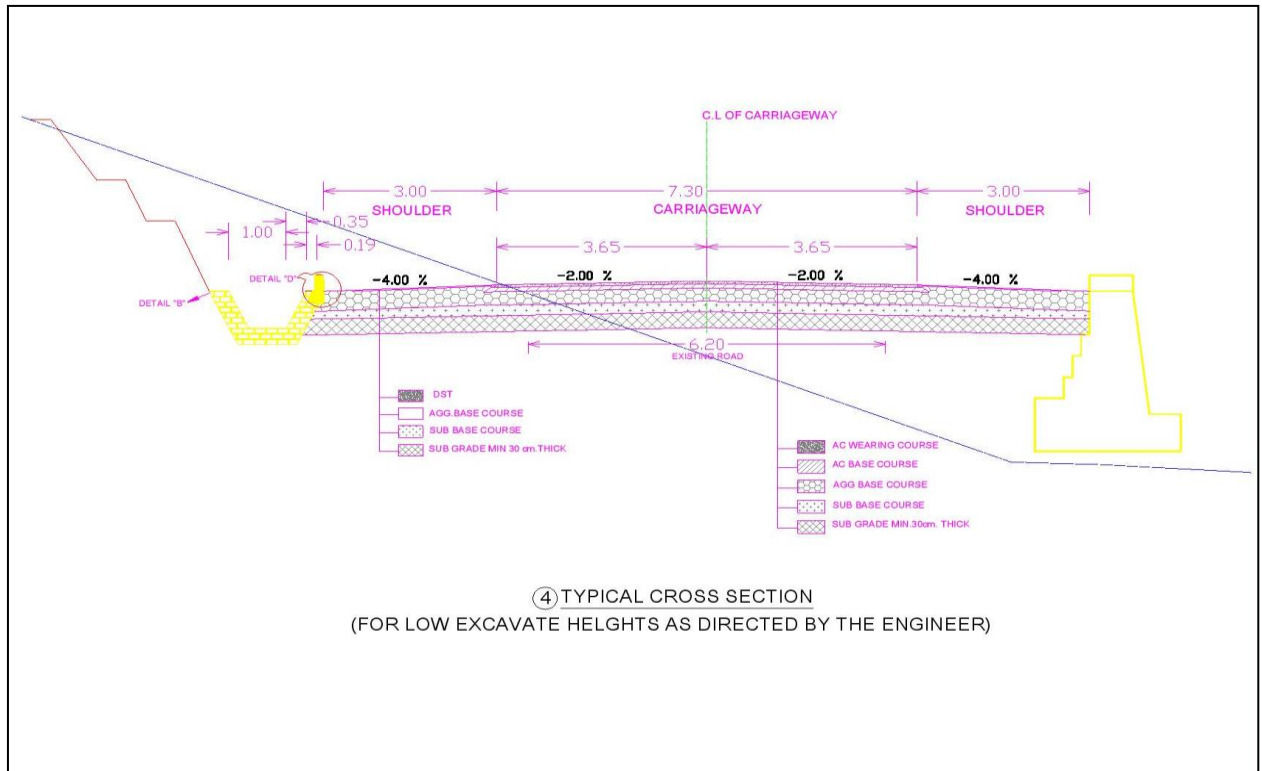
Item No	Description				TOTAL LENGTH (KM)	Cost / Km (USD)	Total Cost (USD)	Previous Month	Reporting Month	Accumulative			
								Km Wise Completed	Km Wise Completed	Km Wise Completed	Cost (USD)	Progress %	
STRUCTURES WORK													
2.1	BOX CULVERT		113	19	132	49.7	11,202.23	556,750.80	9.00	0.20	9.20	103,060.51	19
2.2	PIPE CULVERT		103	13	116	49.7	389.05	19,335.61	19.65	2.00	21.65	8,422.86	44
						11,591.28	576,086.42				111,483.37	19	
3: DRAINAGE, EROSION WORKS													
3.1	Retaining Wall / Toe Wall/ Side Drain				49.7	7,887.99	392,033.10	47.65	0.00	47.65	375,862.72	96	
							392,033.10				375,862.72	96	

Structures Work & Drainage, Erosion Works

1.6 ALIGNMENT SKETCH – JANGLE PIRALIZAI – CHAMAN (SECTION 4)

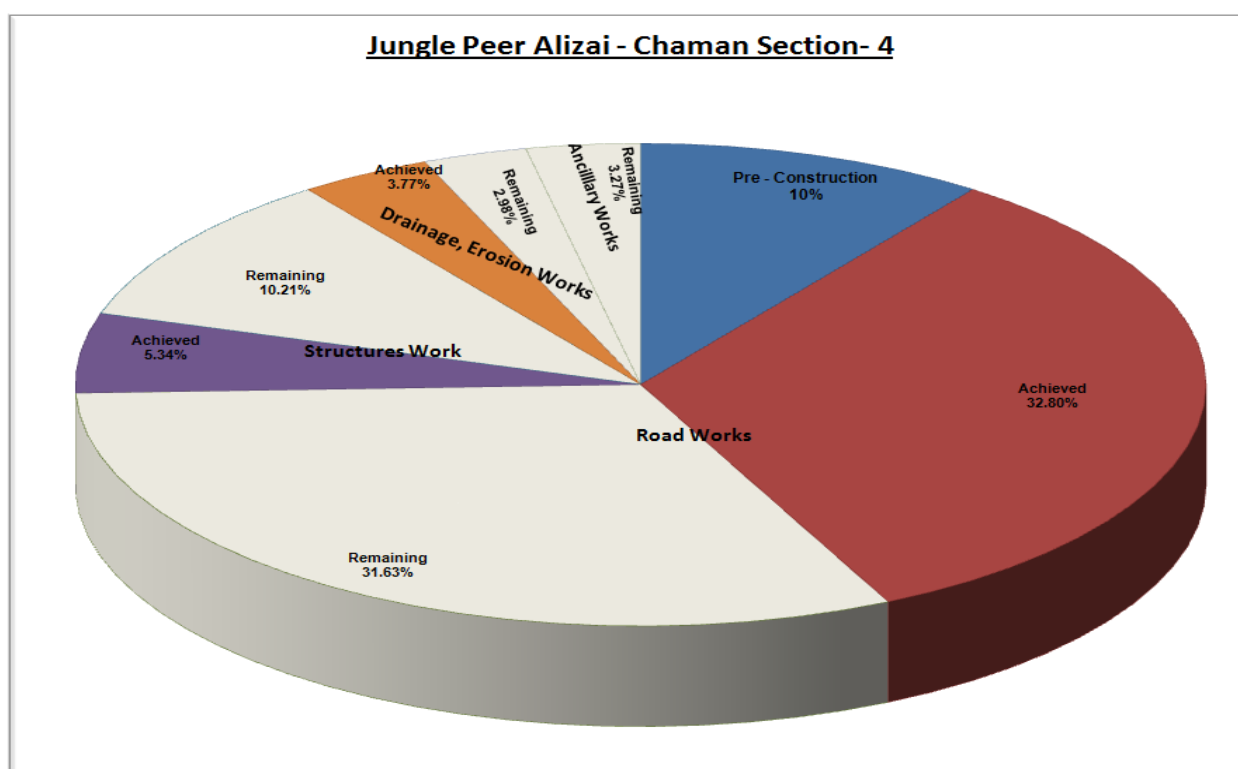






1.7 Physical Progress Section-4

Rehabilitation, Widening & Improvement of National Highway (N – 25)						
Jungle Peer Alizai - Chaman Section- 4						
Sub Section -1 To 12						
Km 59 + 800 to Km 116+ 424 (TOTAL LENGTH 56.624 KM)						
Progress as of November30,2014						
S. Nos	Description	SUB ACTIVITY COST (USD)	SUB ACTIVITY COST %	Achieved Progress		BALANCE
				COST (USD)	Progress %	
1	Pre - Construction Cost	4,167,877.00	10%	4,167,877.00	10%	-
2	ROAD WORKS	26,852,272.07	64.43%	13,668,712.18	32.80%	31.63%
3	STRUCTURES WORK	6,482,359.00	15.55%	2,227,535.42	5.34%	10.21%
4	DRAINAGE, EROSION WORKS	2,815,373.00	6.75%	1,571,833.69	3.77%	2.98%
5	ANCILLARY WORKS	1,360,895.00	3.27%	-		3.27%
	TOTAL:	41,678,776	100%	21,635,958	51.91%	48.09%



Rehabilitation, Widening & Improvement of National Highway (N – 25)

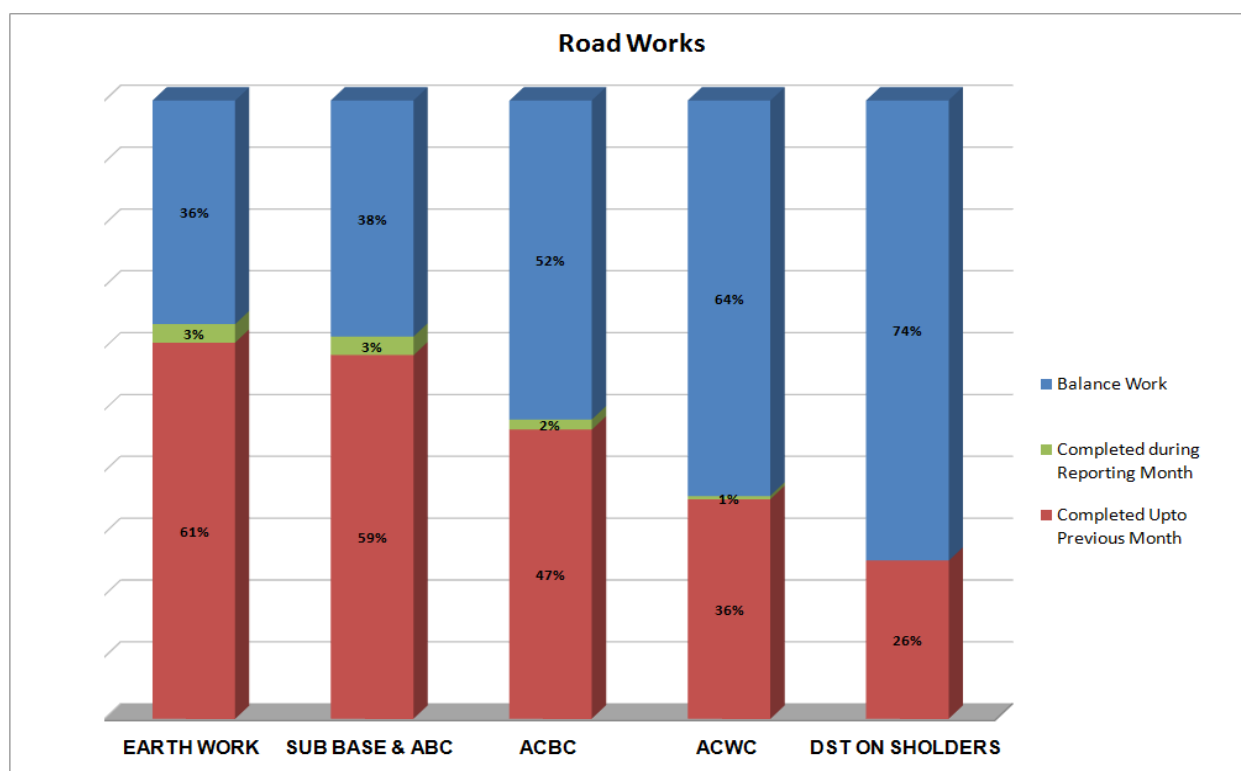
Jungle Peer Alizai - Chaman Section- 4

Sub Section -1 To 12

Km 59 + 800 to Km 116+ 424 (TOTAL LENGTH 56.624 KM)

Progress as of November 30, 2014

Item No	Description	TOTAL LENGTH (KM)	Cost / Km (USD)	Total Cost (USD)	Previous Month	Repoting Month	Accomulative		
					Km Wise Complete	Km Wise Complete	Km Wise Complete	Cost (USD)	Progress %
1: ROAD WORKS									
1.1	Earth Work & Scarification	56.6	100,075.14	5,664,253.04	34.44	1.70	36.14	3,616,715.63	64
1.2	Granular Sub Base & Aggregate base course	56.6	124,869.70	7,067,625.02	33.30	1.70	35.00	4,370,439.50	62
1.3	Asphaltic Base Course & Prime Coat	56.6	113,370.05	6,416,745.06	26.50	0.90	27.40	3,106,339.48	48
1.4	Tack Coat & Asphaltic Concrete for Wearing Course (Class-A)	56.6	101,977.61	5,771,932.95	20.10	0.30	20.40	2,080,343.33	36
1.5	DST ON Shoulder	56.6	34,129.26	1,931,716.00	14.50	0.00	14.50	494,874.24	26
				26,852,272				13,668,712	51



Rehabilitation, Widening & Improvement of National Highway (N – 25)

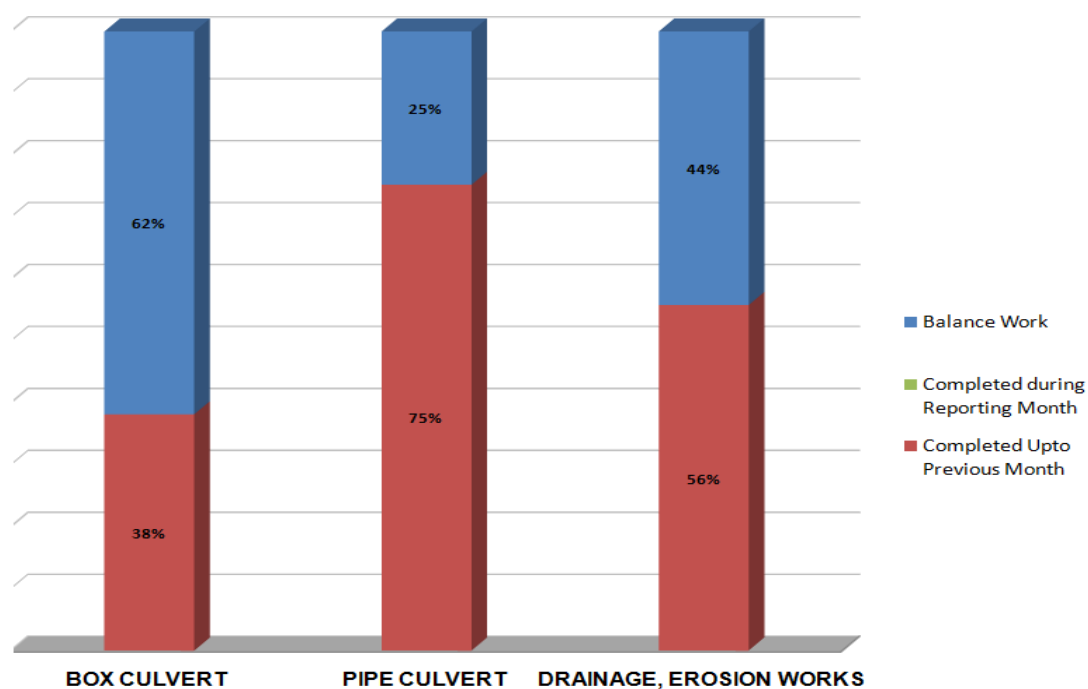
Jungle Peer Alizai - Chaman Section- 4

Sub Section -1 To 12

Km 59 + 800 to Km 116+ 424 (TOTAL LENGTH 56.624 KM)

Progress as of November 30, 2014

Item No	Description					TOTAL LENGTH (KM)	Cost / Km (USD)	Total Cost (USD)	Previous Month	Reporting Month	Accomulative		
									Km Wise Complete	Km Wise Complete	Km Wise Complete	Cost (USD)	Progress %
2: STRUCTURES WORK													
2.1	BOX CULVERT	84	31	115	56.6	100,329.05	5,678,624	21.60	0.00	21.60	2,167,107.39	38	
2.2	PIPE CULVERT	11	11	22	56.6	1,418.50	80,287.00	42.60	0.00	42.60	60,428.02	75	
2.3	BRIDGES/ CAUSEWAYS						723,448.00				-	0	
							6,482,359				2,227,535	34	
3: DRAINAGE, EROSION WORKS													
3.1	Retaining Wall / Toe Wall/ Side Drain					56.6	49,741.57	2,815,373	31.60	0.00	31.60	1,571,833.69	56
								2,815,373				1,571,833.7	56

Structures Work & Drainage and Erosion Works

2 CONSULTANT'S ACTIVITIES DURING THE REPORTING PERIOD

The M&E Consultants undertook the following major activities during the reporting period.

2.1 MEETINGS / PRESENTATIONS

A meeting was held on 27.11.2014 at AGES KQC, Quetta Office under the Chairmanship of the Project Manager AGES KQC Road Project. The meeting was attended by FWO, EGC and AGES staff members. Minutes of the meeting are attached as annexure-IV.

2.2 CONSTRUCTION MONITORING

During the reporting month, M&E staff carried out routine site visits of both the sections. In section 2, following activities were observed:

- The contractor was advised to increase the number of dump trucks to reduce the hauling time and breakage in laying of asphalt.
- The aggregates being used in second coat of DST were observed to be on finer side. The contractor made corrective measures for onward execution of the said activity.
- The contractor was advised to check the camber and road levels before laying of any sub-sequent layer to avoid any complications at later stage.
- Improvement has been observed in fixing of steel, formwork, water cement ratio and construction materials but the chance of improvement is still there.

In Section 4 following activities were monitored:

- Improvement in quality of bricks was observed. FWO/EGC was advised to identify more kilns with better bricks.
- Rip rap on either side of pipe culverts is not according to specifications. FWO was advised to take corrective measures.
- AGES team has observed that a brick masonry gap has been provided in the drawings of battery cell culverts at RD 68+450 & RD 68+950. The said brick masonry gap is provided right in the middle of the battery cell culvert which may eventually get damaged. The matter was discussed with Adviser EGC for corrective measures to rectify the anomaly.
- Deterioration was observed in first layer of ABC at Km 102+00 to Km 103+00 which was laid earlier and opened to the traffic. The contractor was advised for remedial measures before laying of 2nd layer of ABC, the contractor is working accordingly.
- Screen has been provided by the contractor at source for screening of the sub base material for Km 89 + 00 to Km 90 + 00 as advised by AGES team.
- Lab team carried out routine site visits and conducted site required test jointly with FWO/EGC on both the sections during the reporting month. Details of tests conducted

by Lab team are reflected in attached lab report table. To control the gradation of coarse aggregate, screens have been installed at quarry site after tests by AGES team.

As a result of Lab Tests, bricks of better quality are now used. Due to advice of Lab Team; Concrete Mix design was revised by FWO/EGC. New sources of fine and coarse aggregates were identified by FWO/EGC.

2.3 LABORATORY AND FIELD TESTING

- AGES Lab team has jointly with FWO/EGC performed different tests like Compressive strength and aggregate quality tests for concrete. Lab team also performed Asphalt Base course / wearing course quality/compaction tests during reporting period.
- The Lab has been established after receipt of testing equipment's from Swat, Lahore & Peshawar and is fully functional.

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-II KALAT - QUETTA)

ASPHALTIC CONCRETE BASE COURSE QUALITY TESTS REPORT

	Specific Gravity A.C (Gb) 1.030											Combine Specific Gravity of Aggregate (Gsb) 2.665						
S No	Paving Date	Station	Type of Work	% A.C by Wt of Mix Pb	Sieves analysis							Bulk Sp. Gr. Gmb	Maximu m Sp.Gravi ty Gmm	% Air Voids (V2)	VMA (%)	Stabili ty (kg)	Flow (0.01") (0.25m m)	Los of Stabili ty (%)
					2"	1-1/2"	3/4"	#4	#8	#50	#200							
	Specification Limits				100	90/100	56/69	28/40	20/28	4/10	3/5	-	-	4 – 8	13	2250	12 - 21	25
1	8/11/14	71+240	ACBC	3.40	100	100	65.8 30.3	15.5	5.8	3.3	2.425	2.575	5.82	12.6	2701	13.7	15	
2	9/11/14	70+750	ACBC	3.2	100	100	59.9 26.8	13.5	5.4	3.0	2.42	2.571	5.87	12.6	2744	14.3	15.8	
3	17/11/14	77+645	ACBC	3.21	100	100	68.1 38.9	24.6	9.3	4.8	2.439	2.548	4.27	11.9	2808	14	15.7	

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-II KALAT - QUETTA)

ASPHALTIC CONCRETE WEARING COURSE QUALITY TESTS REPORT

S/No	Paving Date	Station	Type of Work	% A.C by Wt of Mix Pb	Sieves analysis							Bulk Sp. Gr. Gmb	Maximum Sp. Gravity Gmm	% Air Voids (V2)	VMA (%)	Stability (kg)	Flow (0.01") (0.25 mm)	Los of Stability (%)
					1"	3/4"	3/8"	#4	#8	#50	#200							
	Specification Limits			4.2±0.3	100	90/100	57/71	38/46	24/32	5/12	3.7/5.7	-		4-7	11	1000	8-14	20
1	31-10-14	60+350	ACWC	4.13	Only bitumen content percentage checked													
2	19-11-14	71+420	ACWC	4.13	100	92.9	60.7	41.8	26.4	9.6	4.1	2.422	2.530	4.27	12.9	1635	8.5	15

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-II KALAT - QUETTA)

ASPHALTIC BASE COURSE CORES COMPACTION REPORT

S.No	DATE	Type of Work	STATION	SIDE	CORE THICKNESS	WT. IN AIR (gm)	WT. IN WATER (g)	SSD.WT (g)	VOLUME (CC)	CORE DENSITY (gm/cc)	MARSHAL MOULD DENSITY	COMPACTION %		REMARKS
												OBTAINED	REQUIRED	
1	9/11/2014	ACBC	71+300	R/S	7.1	2572	1480	2586	1106	2.325	2.390	97.3	97	OK
2	9/11/2014	ACBC	71+300	C/L	8.3	3162	1820	3182	1362	2.321	2.390	97.1	97	OK
3	9/11/2014	ACBC	71+300	L/S	8.0	2931	1679	2941	1262	2.322	2.390	97.2	97	OK
4	9/11/2014	ACBC	71+600	R/S	7.9	2769	1595	2783	1188	2.330	2.390	97.5	97	OK
5	9/11/2014	ACBC	71+600	L/S	8.4	2959	1704	2976	1272	2.326	2.390	97.3	97	OK
6	18/11/2014	ACBC	70+200	L/S	8.0	2802	1633	2811	1178	2.379	2.400	99.1	97	OK
7	18/11/2014	ACBC	70+650	R/S	8.0	2898	1693	2905	1212	2.391	2.400	99.6	97	OK

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-II KALAT - QUETTA)

AGGREGATE BASE COURSE FIELD DENSITY TESTS REPORT

S.NO	FDT No	Type of work	Date	Location (km)	Station	Layer	F.D.D	M.C	M.D.D	O.M.C	Adjusted M.D.D	Obtained Compaction	Required Compaction	Remarks
1	1	C/way	28/10/2014	71+400 to 71+550	71+550	TOP	2.323	4.7	2.290	5.5	2.33	99.7	100	OK
2	2	C/way	31/10/2014	71+550 to 71+650	71+580 R/S	TOP	2.357	5.0	2.290	5.5	2.341	100.7	100	OK
3	3	C/way	31/10/2014	71+650 to 71+750	71+690 L/S	TOP	2.336	5.3	2.290	5.5	2.329	100.3	100	OK
4	4	Shoulder L/s	9/11/2014	81+000 to 82+550	81+070	TOP	2.353	4.0	2.300	5.5	2.346	100.3	100	OK
5	5	C/way	9/11/2014	70+400 to 70+800	77+450	TOP	2.343	3.5	2.300	5.5	2.343	100.0	100	OK
6	6	C/way	10/11/2014	70+500 to 70+750	70+570	TOP	2.342	5.0	2.300	5.5	2.342	100.2	100	OK
7	7	Shoulder R/s	18/11/2014	70+000 to 72+250	72+185 R/S	TOP	2.252	5.0	2.280	6.0	2.322	97.0	100	Not Ok Ref: (7/A)
8	7/A	Shoulder R/s	18/11/2014	70+000 to 72+250	72+185 R/S	TOP	2.322	4.7	2.290	5.5	2.33	99.7	100	Re Tested
9	8	Shoulder L/s	20/11/2014	83+750 to 84+000	83+820 L/S	TOP	2.365	4.3	2.292	5.6	2.344	100.9	100	OK
10	9	Shoulder R/s	20/11/2014	83+500 to 85+750	83+670 R/S	TOP	2.381	4.6	2.292	5.6	2.346	101.5	100	OK
11	10	Shoulder R/s	20/11/2014	82+250 to 82+500	82+230 R/S	TOP	2.354	4.5	2.285	5.7	2.338	100.7	100	OK
12	11	Shoulder R/s	20/11/2014	82+750 to 83+00	82+917 R/S	TOP	2.343	4.6	2.285	5.7	2.332	100.5	100	OK
13	12	Shoulder L/s	20/11/2014	83+500 to 83+750	83+665 R/S	TOP	2.337	4.9	2.292	5.6	2.337	100.0	100	OK
14	13	Shoulder L/s	20/11/2014	82+500 to 82+750	82+600 L/S	TOP	2.357	4.1	2.285	5.7	2.334	101.0	100	OK
15	14	Shoulder L/s	20/11/2014	82+250 to 82+500	82+375 L/S	TOP	2.363	4.4	2.285	5.7	2.333	101.3	100	OK
16	15	Shoulder L/s	20/11/2014	83+00 to 83+250	83+200 L/S	TOP	2.356	4.2	2.292	5.6	2.345	100.5	100	OK

MONTHLY SUMMARY FOR THE MONTH FO NOV: 2014 (SECTION II KALAT-QUETTA)

AGGEEGATE BASE COURSE MATERIAL QAULITY TEST REPORT

S.NO	Type of work	Date	Location(km)	Station	Layer	Sieve analysis													Remarks
		Specification				2"	1"	3/8"	#4	#10	#40	#200	L.A	P.I	S.E	M.D.D	O M C	CBR	
						100	70/95	30/65	25/55	15/40	8/20	2/8	40	-	-	-	-	-	
4	Shoulder R/s	21/11/2014	72+100 to 72+230	72+185	TOP	100	82.2	50.8	40.2	31.8	-	20.7	-		-	-	6	-	Not OK
5	C/way	23/11/2014	70+00 to 70+150	70+030	TOP	100	90.5	52.2	36.4	26.5	-	8.0	24.9		-	-	-	-	OK

MONTHLY SUMMARY FOR THE MONTH OF NOV:2014 (Section-II KALAT - QUETTA)

EMBANKMENT/SUBGRADE MATERIAL FIELD DENSITY TESTS REPORT

S.NO	FDT No	Date	TYPE OF WORK	Location (km)	Station	Layer	F.D.D	M.C	M.D.D	O.M.C	Obtained Compaction	Required Compaction	Remarks
2	2	28/10/2014	Backfill	Culvert	79+595	-	2.098	5.8	2.190	7.9	95.8	95.0	OK

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)																		
ASPHALTIC CONCRETE BASE COURSE QUALITY TESTS REPORT																		
Specific Gravity A.C (Gb) 1.030												Combine Specific Gravity of Aggregate (Gsb) 2.663						
S NO	Paving Date	Station	Type of Work	% A.C by Wt of Mix Pb	Sieves analysis							Bulk Sp. Gr. (Gmb)	Maxim um Sp. Gravity (Gmm)	% Air Voids (V2)	VMA (%)	Stability (kg)	Flow (0.01") (0 .25mm)	Loss of stability %
					2"	1-1/2"	3/4"	#4	#8	#50	#200							
Specification Limits for JMF			ACBC	3.3 ± .3	100	100	58/72	29/37	20/27	4/10	2.9/4.9	nil	nil	4/8	11 Min	2250 Min	12/21 25Max	
1	26-10-2014	1+325	ACBC	3.37	100	100	70.2	35.8	25.3	8.7	4.4	2.39	2.554	6.4	12.8	2817	15.6 16.8	
2	1/11/2014	1+150	ACBC	3.33	100	100	66.5	38.4	23.8	5.6	3.5	2.400	2.559	6.4	13.0	2716	14.5 18.1	
3	8/11/2014	86+520	ACBC	3.35	100	100	70.4	35.2	22.6	7.6	4.2	2.396	2.557	6.6	13.3	2839	15.8 17.8	
4	12/11/2014	87+010	ACBC	3.42	100	100	67.2	35.4	21.6	5.2	3.5	2.391	2.541	5.9	13.3	2787	17 17.2	
5	17-11-2014	87+120	ACBC	3.31	100	100	72.4	35.6	22.9	6.7	3.7	2.394	2.544	5.9	13.1	2811	16.2 17.6	
6	20-11-2014	3+400	ACBC	3.33	100	100	68.9	36.2	21.6	6.8	3.8	2.391	2.561	5.8	13.2	2815	17.3 17.5	
7	22-11-2014	3+610	ACBC	3.41	100	100	67.2	35.7	23	7.9	4.1	2.338	2.524	5.9	13.4	2802	17.5 17.6	
8	29-11-2014	69+090	ACBC	3.33	100	100	68.0	36.7	21.8	7.6	3.9	2.391	2.556	6.5	13.2	2802	17.5 17.8	

ASPHALTIC CONCRETE WEARING COURSE QUALITY TESTS REPORT (Section-IV Quetta Chaman)																		
Specific Gravity A.C (Gb) 1.030												Combine Specific Gravity of Aggregate (Gsb) 2.665						
S No	Paving Date	Station	Type of Work	% A.C by Wt of Mix Pb	Sieves analysis							Bulk Sp. Gr. (Gmb)	Maxim um Sp. Gravity (Gmm)	% Air Voids (V2)	VMA (%)	Stability (kg)	Flow (0.01")(0. 25mm)	Loss of stability %
					1"	3/4"	3/8"	#4	#8	#50	#200							
Specification Limits for JMF				4.3± .3	100	91/99	61/69	38/46	23/31	4/14	3.7/5.7	Nil	Nil	4/7	13 min	1000	8/14	20
1	25-11-14	75+915	ACWC	4.3	100	98	65.4	43.9	29.6	8.3	4.3	2.332	2.454	5.0	16.2	1294	10.9	15.5
2	26-11-14	75+770	ACWC	4.29	100	86.5	62.7	38.5	24.1	5.9	3.8	2.334	2.494	6.4	16.1	1295	11.0	15.8

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)**ASPHALTIC CONCRETE BASE COURSE CORES COMPACTION REPORT**

S No	Core. No	DATE	TYPE OF WORK	STATION	SIDE	CORE THICKNESS	WT. IN AIR (gm)	WT. IN WATER (g)	SSD.WT (g)	VOLUME (CC)	CORE DENSITY (gm/cc)	MARSHAL MOULD DENSITY	COMPACTION %		REMARKS
													ACHIEVED	REQUIRED	
1	11	26-10-2014	ACBC	70+350	C/L	9.6	3678.8	2189.8	3722.1	1532.3	2.401	2.402	100	97	OK
2	12	26-10-2014	ACBC	70+250	L/S	9.8	3832.3	2224.7	3866.1	1641.4	2.335	2.402	97.2	97	OK
3	13	26-10-2014	ACBC	70+153	R/S	8.2	3208	1872.7	3246	1373.3	2.336	2.402	97.3	97	OK
4	14	26-10-2014	ACBC	70+050	C/L	10.8	4100.5	2414.7	4137	1722.3	2.381	2.402	99.1	97	OK
5	15	26-10-2014	ACBC	69+950	L/S	10.1	3807.8	2250.1	3845.6	1595.5	2.387	2.404	99.2	97	OK
6	16	26-10-2014	ACBC	69+865	R/S	8.7	3248.7	1901.1	3288.6	1387.5	2.341	2.404	97.3	97	OK
7	17	26-10-2014	ACBC	68+790	L/S	8.4	3126.4	1852.6	3161.5	1308.9	2.389	2.396	99.7	97	OK
8	18	26-10-2014	ACBC	67+790	L/S	10.9	4146.2	2424.2	4183	1758.8	2.357	2.396	98.4	97	OK
9	19	26-10-2014	ACBC	68+725	R/S	9.6	3665.1	2164.1	3711.3	1547.2	2.369	2.396	98.9	97	OK
10	20	26-10-2014	ACBC	67+460	C/L	9.3	3959.4	2334.3	3992.6	1658.3	2.388	2.401	99.5	97	OK
11	21	26-10-2014	ACBC	67+050	C/L	8.8	3603.8	2111.3	3631.7	1520.4	2.370	2.401	98.7	97	OK
12	22	26-10-2014	ACBC	67+275	R/S	10.7	4253.2	2468.4	4293.3	1824.9	2.331	2.401	97.1	97	OK
13	23	28-10-2014	ACBC	70+580	L/S	8.3	3052.6	1791.6	3077.6	1286	2.374	2.402	98.8	97	OK
14	24	28-10-2014	ACBC	70+480	R/S	9.5	3727.5	1261	3746.7	1585.7	2.351	2.402	97.9	97	OK
15	25	15-11-2014	ACBC	0+200	L/S	12	4298	2483.3	4326.8	1843.5	2.294	2.395	95.8	97	NOT OK (Ref: 25/A, 25/B)
16	26	15-11-2014	ACBC	0+500	C/L	10.2	3400	1998.4	3431.6	1433.2	2.372	2.395	99.0	97	OK
17	27	15-11-2014	ACBC	0+750	R/S	9	2734	1635.4	2760	1124.6	2.431	2.395	101.5	97	OK
18	28	15-11-2014	ACBC	1+000	C/L	13	4776	2786.5	4799.1	2012.6	2.373	2.396	99.0	97	OK
19	29	15-11-2014	ACBC	1+250	L/S	10.3	3796	2182.6	3820.9	1638.3	2.317	2.394	96.8	97	OK
20	30	15-11-2014	ACBC	1+500	C/L	10.2	3716	2131.3	3738	1606.7	2.313	2.394	96.6	97	OK

21	31	15-11-2014	ACBC	1+750	R/S	8.6	3009	1746.7	3031.3	1284.6	2.342	2.97	97.7	97	OK
22	32	15-11-2014	ACBC	2+00	C/L	7.9	3081	1791.4	3095.2	1303.8	2.363	2.97	98.6	97	OK
23	25/A	19-11-2014	ACBC	0+197	L/S	11.5	4208.6	2432.7	4237.4	1804.7	2.332	2.395	97.4	97	OK
24	25/B	19-11-2014	ACBC	0+203	L/S	11.9	4464.9	2563.4	4486.6	1923.2	2.322	2.395	96.9	97	OK

- Station 0+200 re-coring Avg. of Core no.25,25/A,25/B=96.7%

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)**AGGREGATE BASE COURSE FIELD DENSITY TESTS REPORT**

S No	FDT.NO	Date	Type of Work	Location (km)	Station	Layer	F.D.D	M.C	M.D.D	O.M.C	Adjusted M.D.D	Obtained Compaction	Required Compaction	Remarks
1	8	26-10-2014	Carriage way F/W	0+600-0+800	0+650 R/S	2 nd	2.344	4.0	2.280	5.7	2.355	100.4	100	OK
2	9	26-10-2014	Shoulder R/S	74+400-74+600	74+490 R/S	1 st	2.352	5.0	2.280	5.7	2.354	99.9	100	OK
3	10	26-10-2014	Shoulder R/S	74+600-74+850	74+842 R/S	1 st	2.364	5.0	2.280	5.7	2.335	101.2	100	OK
4	11	26-10-2014	Shoulder R/S	74+600-74+850	74+689 R/S	1 st	2.360	6.0	2.280	5.7	2.322	101.6	100	OK
5	12	28-10-2014	Carriage way F/W	0+077-0+200	0+140 R/S	2 nd	2.352	4.0	2.280	5.7	2.350	100.1	100	OK
6	13	28-10-2014	Carriage way F/W	0+200-0+300	0+270 L/S	2 nd	2.322	4.0	2.280	5.7	2.318	100.2	100	OK
7	14	28-10-2014	Carriage way F/W	0+300-0+400	0+380 R/S	2 nd	2.225	4.0	2.280	5.7	2.332	95.4	100	Not OK (Ref: 14/A)
8	14/A	29-10-2014	Carriage way	0+300-0+400	0+350 R/S	2nd	2.340	4.2	2.280	5.7	2.332	100.3	100	OK
9	15	30-10-2014	Carriage way F/W	3+100-3+200	3+125 L/S	1 st	2.327	4.2	2.280	5.7	2.368	98.3	100	Not OK (Ref: 15/A)
10	15/A	22-11-2014	Carriage Way	3+100-3+200	3+180 R/S	1st	2.429	4.5	2.280	5.7	2.332	99.7	100	OK
11	16	8/11/2014	Carriage way F/W	86+900-87+00	86+950 L/S	2 nd	2.328	4.6	2.280	5.7	2.335	99.7	100	OK
12	17	8/11/2014	Carriage way F/W	87+00-87+100	87+025 L/S	2 nd	2.364	5.0	2.280	5.7	2.343	100.9	100	OK
13	18	8/11/2014	Carriage way F/W	3+525-3+725	3+665 R/S	1 st	2.242	4.0	2.280	5.7	2.339	95.9	100	Not OK (Ref: 18/A)
14	18/A	9/11/2014	Carriage Way	3+525-3+725	3+560 R/S	1st	2.344	4.5	2.280	5.7	2.339	100.2	100	OK
15	19	11/11/2014	Shoulder R/S	85+850-85+100	85+900 R/S	3 rd	2.331	4.5	2.280	5.7	2.335	99.8	100	OK
16	20	11/11/2014	Shoulder R/S	86+275-86+450	86+409 R/S	3 rd	2.332	5.0	2.280	5.7	2.322	100.4	100	OK
17	21	11/11/2014	Carriage way L/S	87+100-87+200	87+147 L/S	2 nd	2.256	4.0	2.280	5.7	2.387	94.5	100	Not OK (Ref: 21/A)
18	21/A	15/11/2014	Carriage Way R/S	87+100-87+200	87+150 R/S	2nd	2.447	4.0	2.280	5.7	2.348	100.2	100	OK
19	22	15-11-2014	Carriage way R/S	87+100-87+200	87+150 R/S	2 nd	2.353	4.0	2.280	5.7	2.348	100.2	100	OK
20	23	15-11-2014	Carriage way F/W	3+325-3+425	3+412 L/S	2 nd	2.232	4.0	2.280	5.7	2.350	95.0	100	Not OK
21	24	17-11-2014	Carriage way F/W	100+000-101+000	100+200 R/S	1st	2.208	3.0	2.280	5.7	2.343	94.3	100	Not OK
22	25	17-11-2014	Carriage way F/W	100+000-101+000	100+700 L/S	1st	2.317	3.0	2.280	5.7	2.306	100.5	100	OK

AGGREGATE BASE COURSE FIELD DENSITY TESTS REPORT (Section-IV Quetta Chaman)														
S No	FDT.NO	Date	Type of Work	Location (km)	Station	Layer	F.D.D	M.C	M.D.D	O.M.C	Adjusted M.D.D	Obtained Compaction	Required Compaction	Remarks
23	26	17-11-2014	Carriage way F/W	101+000-102+000	101+130 R/S	1st	2.186	3.0	2.280	5.7	2.317	94.3	100	Not OK
24	27	17-11-2014	Carriage way F/W	101+000-102+000	101+700 L/S	1st	2.145	3.0	2.280	5.7	2.303	93.1	100	Not OK
25	28	18-11-2014	Carriage way F/W	3+425-3+500	3+450 R/S	2nd	2.355	5.5	2.280	5.7	2.35	100.2	100	OK
26	29	22-11-2014	Carriage way F/W	3+100-3+200	3+180 C/L	1st	2.324	4.5	2.280	5.7	2.332	99.7	100	OK
27	30	22-11-2014	Carriage way F/W	102+850-102+950	102+890 L/S	1st	2.309	4.0	2.280	5.7	2.311	99.9	100	OK
28	31	22-11-2014	Carriage way F/W	102+700-102+800	102+735 R/S	1st	2.232	4.0	2.280	5.7	2.339	95.4	100	Not OK (Ref: 31/A)
29	32	22-11-2014	Carriage way F/W	102+800-102+850	102+860 L/S	1st	2.232	4.0	2.280	5.7	2.350	95.0	100	Not OK (Ref: 32/A)
30	31/A	24-11-2014	Carriage way F/W	102+700-102+800	102+780 R/S	1st	2.344	4.0	2.280	5.7	2.335	100.4	100	OK
31	32/A	24-11-2014	Carriage way F/W	102+800-102+850	102+810 L/S	1st	2.331	4.2	2.280	5.7	2.329	100.1	100	OK
32	33	26-11-2014	Shoulder R/S	105+450-105+850	105+525 R/S	1st	2.281	3.8	2.280	5.7	2.325	98.1	100	Not OK
33	34	26-11-2014	Carriage Way	102+000-102+200	102+150 R/S	1st	2.243	4.0	2.280	5.7	2.354	95.3	100	Not OK
34	35	26-11-2014	Carriage Way	102+200-102+400	102+370 L/S	1st	2.233	4.0	2.280	5.7	2.336	95.6	100	Not Ok (Ref: 35/A)
35	36	26-11-2014	Carriage Way	102+400-102+600	102+520 R/S	1st	2.189	4.0	2.280	5.7	2.339	93.6	100	Not OK
36	37	26-11-2014	Carriage Way	102+600-102+700	102+640 C/L	1st	2.185	4.0	2.280	5.7	2.325	94.0	100	Not OK
37	35/A	27-11-2014	Carriage Way	102+500-102+600	102+560 C/L	1st	2.334	4.5	2.280	5.7	2.325	100.4	100	OK
38	38	29-11-2014	Shoulder R/S	0+075-0+275	0+150	1st	2.348	4.7	2.280	5.7	2.343	100.2	100	OK
39	39	29-11-2014	Shoulder R/S	0+275-0+425	0+395	1st	2.359	4.6	2.280	5.7	2.350	100.4	100	OK

Note: Due to no work FDT Nos. 23, 24, 26, 27, 33, 34, 36 & 37 has not yet been retested.

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section- IV Quetta Chaman)

AGGREGATE BASE COURSE MATERIAL QUALITY TESTS REPORT

S N o	Lab. NO	Date	Location (km)	Station	Layer	Sieve analysis							MDD (g/cc)	OMC %	S.E	P.I	L.A%	CBR	Remarks
						2"	1"	3/8"	#4	#10	#40	#200							
Specification Limits						100%	70/95	30/65	25/55	15/40	8-20%	2-8%			45 Min	4 Max	40 Max	80 Min	
1	4	28-10-2014	Stock File	74+00		100	87.2	56.9	43.6	22.9	8	5.0	-	-	-	-	-	-	OK
2	5	01-11-2014	Shoulder L/S	85+725	1st	100	83.4	39.8	26.9	12.6	7.1	5.3	-	-	49	2	23	-	OK
3	6	8/11/2014	Stock File	Sheela Bagh Camp		100	77.8	38	32.2	20.4	12.4	7.2	-	-	-	-	26	-	OK
4	7	9/11/2014	C/Way	3+480	1st	100	75.1	35.2	29	18.2	11.1	6.7	-	-	-	-	-	-	OK
5	8	27/11/2014	Shoulder R/S	105+525	1st	100	88.4	62.6	50.7	33.3	16.9	6.6	-	-	-	-	-	-	OK
6	9	27/11/2014	Shoulder R/S	75+600	1st	100	82.4	50.9	39.0	25.0	14.8	6.9	-	-	-	-	-	-	OK
7	10	27/11/2014	Carriage Way	102+910	2nd	100	89.8	58.4	45.8	34.0	18.4	7.4	2.283	5.6	-	-	-	-	OK

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)

SUBBASE MATERIAL FIELD DENSITY TESTS REPORT

S No	LAB. NO	Date	Location (km)	Station	Type of Work	Layer	F.D.D	M.C	M.D.D	O.M.C	Adjusted M.D.D	Achieved Compaction	Required Compaction	Remarks
1	1	29-10-2014	-	3+340 R/S	C/Way	2nd	2.241	4.9	2.275	6.6	2.275	98.5	98	OK
2	2	15-11-2014	3+225-3+325	3+275 C/L	C/Way	1 st	2.168	4.6	2.230	6.6	2.247	96.1	98	Not OK (Ref: 2/A)
3	2/A	21-11-2014	3+225-3+325	3+300 L/S	C/Way	1st	2.259	5.6	2.275	6.6	2.330	98.2	98	OK
4	3	24-11-2014	3+700-3+800	3+760 R/S	C/Way	2nd	2.278	5.5	2.275	6.6	2.310	98.6	98	OK
5	4	24-11-2014	3+800-3+850	3+820 L/S	C/Way	2nd	2.263	5.8	2.275	6.6	2.304	98.2	98	OK

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)

SUBBASE MATERIAL QUALITY TESTS REPORT

S No	Lab. NO	Date	Location (km)	Station	Type of Work	Layer	Sieve analysis							MDD (g/cc)	OMC %	L.A %	Sand Equivalent	CBR % at 0.1"	PI	Remarks
							2"	1"	3/8"	#4	#10	#40	#200							
Specification Limits							100	55/85	40/70	30/60	20/50	10/30	5/15			50 Max	25 Min	50 Min	6 Max	
1	1	29-10-2014	Pit hole material	3+340 R/S	C/Way	2nd	100	87.6	72.1	61.1	44.3	23.8	15.1							
2	1/A	2/11/2014	-	87+043	C/Way	1st	100	87.1	59.0	46.2	34.1	19.1	12.2	2.230	6.6	26.3	26.0	74.0	3.3	
3	2	16-11-2014	3+275-3+375		C/Way	1st	100	86.1	62.6	49.3	33	18.1	11.1							
4	2/A	19-11-2014	3+275-3+375	3+350 L/S	C/Way	1st	100	84	63.1	48.2	34.3	17	10.4							Re-Sample
5	3	23-11-14	89+100-89+300	89+240	C/Way	1st	100	84.3	56.4	45.1	31.1	26.3	14.6							
6	4	24-11-14	3+225-3+300	3+265	C/Way	2nd	100	84.4	68.2	48.7	45.6	26.9	14.5	2.272	6.7					

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)

EMBAKMENT/SUBGRADE MATERIAL FIELD DENSITY TESTS REPORT

S No	Lab. NO	Date	Description	Location (km)	Station	Type of Work	Layer	F.D.D	M.C	M.D.D	O.M.C	Achieved Compaction	Required Compaction	Remarks
1	1	30-10-14	Sub Grade full width	91+200-91+325	91+275 L/S	C/Way L/S	Top	2.171	6.0	2.245	7.4	96.7	95	OK
2	2	30-10-14	Sub Grade full width	91+250-91+300	91+297 R/S	C/Way R/S	Top	2.071	5.5	2.245	7.4	92.3	95	Not OK Ref: 2/A
3	2/A	2-11-14	Sub Grade full width	91+250-91+300	91+260 R/S	C/Way R/S	Top	2.149	6.4	2.245	7.4	95.7	95	OK
4	3	6/11/14	Sub Grade full width	90+750-90+850	90+825 R/S	C/Way F/W	1st	2.052	5.5	2.245	7.4	91.4	95	Not OK Ref: 3/A
5	4	6/11/14	Embankment	91+875-91+975	91+928 R/S	C/Way	Top	2.112	6.5	2.245	7.4	94.1	93	OK
6	5	6/12/14	Drain Bed	60+065-60+112	60+067 R/S	Drain	Bed	2.138	5.5	2.245	7.4	95.2	95	OK
7	6	8/11/14	Sub Grade full width	90+750-90+850	90+800 L/S	C/Way	1st	2.081	5.5	2.245	7.4	92.7	95	Not OK (carried over to next month)
8	7	8/11/14	NGC Zone B	90+275-90+450	90+425 R/S	C/Way	Top	2.078	5.5	2.245	7.4	92.6	93	OK
9	8	8/11/14	Drain Bed		59+907 R/S	Drain	Bed	2.099	6.0	2.245	7.4	93.5	95	Not OK Ref: 8/A
10	8/A	9/11/14	Drain Bed		59+915 R/S	Drain	Bed	2.146	5.7	2.245	7.4	95.6	95	OK
11	3/A	9/11/14	Sub Grade full width	90+750-90+850	90+810 R/S	C/Way	1st	2.162	5.5	2.245	7.4	96.3	95	OK
12	9	15/11/14	Sub Grade full width	91+850-92+000	91+942 R/S	C/Way	1st	2.191	6.0	2.245	7.4	97.6	95	OK
13	10	15/11/14	Sub Grade Left Side	90+950-91+000	90+975 L/S	C/Way	1st	2.175	7.0	2.245	7.4	96.9	95	OK
14	11	15/11/14	Sub Grade Left Side	90+450-90+500	90+470 L/S	C/Way	1st	2.137	5.8	2.245	7.4	95.2	95	OK
15	12	19-11-14	Embankment	108+050-108+200	108+077 L/S	C/Way	1st	2.048	5.5	2.228	7.6	91.9	95	Not OK (carried over to next month)
16	13	22-11-14	Drain Bed		72+590 L/S	Drain		1.939	6.0	2.150	7.6	90.2	95	Not OK (carried over to next month)

17	14	22-11-14	Embankment	105+975-105+600	105+990 R/S	C/Way	4th	2.024	6.4	2.228	7.6	90.8	90	OK
18	15	26-11-14	Coues Way Bed	93+530-93+585	93+550 L/S	Cause way	Bed	2.225	5.5	2.250	7.5	98.9	95	OK

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)

EMBAKMENT/SUBGRADE QUALITY TESTS REPORT

S No	Lab. NO	Date	Description	Location (km)	Station	Layer	Sieve analysis							MDD (g/cc)	OM C%	Sand Equivalent	CBR% at 0.1"	Plastic Index	Remarks
							2"	1"	3/8"	#4	#10	#40	#200						
1	1	10/11/14	Embankment	90+250-90+850		1st	100	91.1	74.6	53.9	24.2	18.4	11.9						
2	2	14-11-14	Drain L/S	72+650-72+850		Bed								2.150	7.6				

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)**SUMMARY OF CONCRETE COMPRESSIVE STRENGTH**

Cylinder No	Casting Date	Class	Part of Structure	Location	Slump (mm)	Mix Temp	Air Temp	Area (cm ²)	Date of 7 days	Dial Reading (kN)	Strength (kg/cm ²)	Avg Strength (kg/cm ²)	28 days Date	Dial Reading (kN)	Strength (kg/cm ²)	Avg Strength (kg/cm ²)	Required Strength (kg/cm ²)	REMARKS
3/A	1/10/2014	A-1	Concrete mix design class A-1	Sheela Bagh Lab	75	17		182.4	8/10/14	354.7	198.3							
3/B								"	"	374.8	209.5							
3/C								"	"	352.4	197	201.6						
3/D								"					29-10-14	500.9	280			
3/E								"					"	513.4	287			
3/F								"					"	509.8	285	284.1	210	OK
4/A	24-10-14	B	Drain Bed L/S	60+000-60+057	70			"	31-11-2014	255.6	142.9							
4/B								"	"	249.7	139.6							
4/C								"	"	250.6	140.1	140.9						
4/D								"					21-11-2014	339.9	190			
4/E								"					"	345.6	193.2			
4/F								"					"	330.7	184.9	189.4	170	OK
2/A	28-10-14	A-1	Top slab, Walls	3+490	70			182.4	4/11/2014	336.2	188							
2/B								"	"	364.7	203.9							
2/C								"	"	355.2	198.6	196.8						
2/D								"					25-11-14	450.2	251.7			
2/E								"					"	464.7	259.8			
2/F								"					"	448.6	250.8	254.1	210	OK
6/A	8/11/2014	B	Parapet Wall	76+700	68			"	15-11-14	245	137							
6/B								"	"	250.4	140							
6/C								"	"	252.1	141	139.3						
6/D								"					6/12/2014	445	248.8			
6/E								"					"	440	246			
6/F								"					"	455	254.3	249.7	170	OK
7/A	10/11/2014	A-1	Culvert Top Slab	87+255	65			"	17-11-14	310.6	173.6							
7/B								"	"	319.7	178.7							
7/C								"	"	306.9	171.6	174.6						

7/D								"					8/12/2014	456.6	255.2			
7/E								"					"	446.2	249.4			
7/F								"					"	458.9	256.5	253.7	210	OK
5/A	11/11/2014	A-1	Bed of Bettyry Cell(unit-1)	65+450	72			"	18-11-14	324.7	181.5							
5/B								"	"	320.9	179.4							
5/C								"	"	330.6	184.9	181.4						
5/D								"					9/12/2014	460	257.1			
5/E								"					"	455	254.3			
5/F								"					"	455	254.3	255.2	210	OK
8/A	13-11-2014	B	Drain Bed	72+650-72+700	75			"	20-11-14	241.4	135.0							
8/B								"	"	235.9	131.8							
8/C								"	"	244.7	136.8	134.6						
8/D								"					11/12/2014	345.1	192.9			
8/E								"					"	350.2	195.8			
								"					"	350.9	196.2	194.3	170	OK
9/A	15-11-2014	B	Drain Bed	72+715	74			"	22-11-2014	254.1	142							
9/B								"	"	247.9	138.6							
9/C								"	"	255.7	142.9	141.2						
9/D								"					13-12-14					
9/E								"					"					
9/F								"					"				170	
10/A	19-11-2014	A-1	Apron Slab	107+750 R/S	70			"	26-11-2014	332.6	185.9							
10/B								"	"	340.7	190.5							
10/C								"	"	338.9	189.4	188.6						
10/D								"					17-12-2014					
10/E								"					"				210	
10/F								"					"					
11/A	19-11-2014	Lean	Cause Way	96+220 R/S				"	26-11-2014	174.4	97.5							
11/B								"	"	176.2	98.5							
11/C								"	"	160.2	89.6	95.2						
11/D								"					17-12-2014					
11/E								"					"				100	
11/F								"					"					
								"										

12/A	19-11-2014	B	Parapet Wall	87+637 L/S	62			"	26-11-2014	290.6	162.4						
12/B								"	"	288.7	161.4						
12/C								"	"	270.8	151.4	158.4					
12/D								"					17-12-2014				
12/E								"					"			170	
12/F								"					"				
13/A	24-11-2014	A-1	Apron Slab	107+450 L/S	65			"	1/12/2014	322.6	180.3						
13/B								"	"	320.9	179.4						
13/C								"	"	294.6	164.7	174.8					
13/D								"					18-12-2014				
13/E								"					"			210	
13/F								"					"				
14/A	24-11-2014	B	Parapet of R/Wall	87+375 L/S	62			"	1/12/2014	286.8	160.3						
14/B								"	"	278.8	155.8						
14/C								"	"	290.9	162.2	159.4					
14/D								"					22-12-2014				
14/E								"					"			170	
								"					"				
15/A	26-11-2014	A-1	Drain Slab	61+425-61+465 R/S	74			"	2/12/2014	320.2	179						
15/B								"	"	309.7	173.1						
15/C								"	"	318.9	178.3	176.8					
15/D								"					23-12-2014				
15/E								"					"			210	
15/F								"					"				
16/A	27-11-2014	A-1	Apron Slab	107+750 R/S	75			"	3/12/2014	300.9	168.2						
16/B								"	"	320.2	179						
16/C								"	"	309.7	173.1	173.4					
16/D								"					24-12-2014				
16/E								"					"			210	
16/F								"					"				

MONTHLY SUMMARY FOR THE MONTH OF Nov: 2014 (Section-IV Quetta-Chaman)

AGGREGATE QUALITY TESTS FOR CONCRETE REPORT

S.N O	Date	Location (km)	Descriptio n	Type of Agg	Sieve Analysis														F-M	L.A %	Sand Equi va lent	Specif ic Gravit y	Sou nd ness	Rema rks	
					C/Aggregate							F/Aggregate													
					2 "	1- 1/2 "	1 "	3/4"	3/8"	#4	#8	3/8 "	#4	#8	#16	#30	#50	#100							#200
5	28/10/14	3+490	Culvert Top Slab	F/Agg								100	95.9	78.4	65.6	45	24.6	8.4	4.5	2.8					OK
6	28/10/14	3+490	Culvert Top Slab	C/Agg(1 /2" down)				100	72.5	15.4	1.8														Not Ok
7	28/10/14	3+490	Culvert Top Slab	C/Agg(3 /4"dow n)				100	9.3	4.5	0.4														Not Ok
8	28/10/14	3+490	Culvert Top Slab	Blend of #6 & #7 50%/50 %				100	38.6	7.9															OK
9	28/10/14	Surkhab Nala	Mix Design A-1	F/Agg								100	90.8	76.3	67.5	43	24.4	8.5	5.7	2.9		76%	2.627		OK
10	9/11/14	87+487	Lean Bed	F/Agg								100	100	93.3	79.5	58.5	43.2	9.4	2.6	2.2					Margi nally Ok
11	9/12/14	87+635	Brick masonry	F/Agg								100	100	98.5	97.4	95.5	88.7	32.1	6.8						Not Ok
12	11/11/14	68+450	Bed of Battery cell culvert(uni t-1)	C/Agg				92.1	35	4.0															OK
13	11/11/14	68+450	Bed of Bettery cell culvert(uni t-1)	F/Agg								100	99.5	86.9	65	43.4	25	9.2	4.3	2.7					OK

2.4 ENVIRONMENTAL COMPLIANCE

- The M&E consultants continued to liaise with relevant stakeholders about environmental, compliance and other concerns relating to the strengthening / improvement of the vital national traffic corridor.
- FWO was advised for demonstrating good environmental practice in conformity with the construction environmental management plan.
- FWO started using Personal Protective Equipment for safety of staff at site.
- Dust pollution being controlled at RD77+400 (Section 2) RD91+700 (Section4) by sprinkling of water but needs to be controlled on Khojak Pass.

Environmental Monitoring Report is attached as Annex-II.

2.5 SECURITY SITUATION

Security Situation report is attached as Annex-III.

ANNEXURES

ANNEXURE-I

M&E Staff

M&E STAFF

The following members of the M&E Team were involved at various activities of the project progressed. Other staff members will be mobilized according to demand of work load.

PROJECT MANAGER OFFICE – STAFF DEPLOYMENT

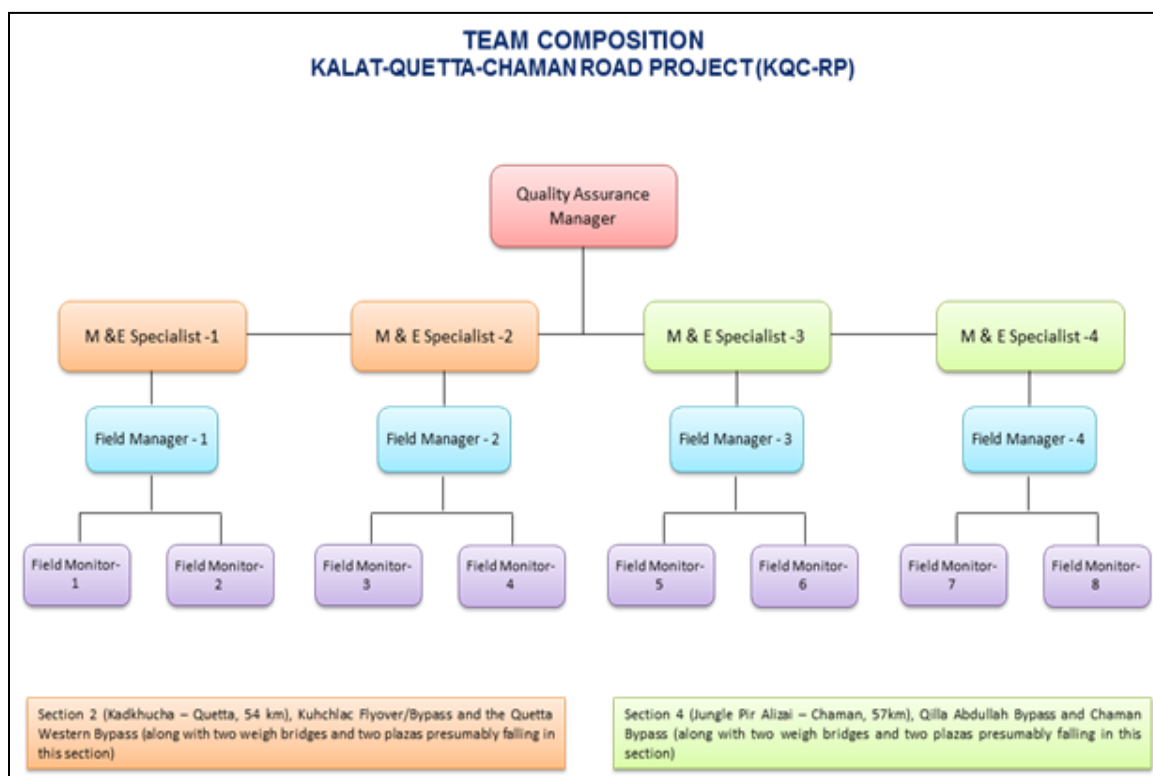
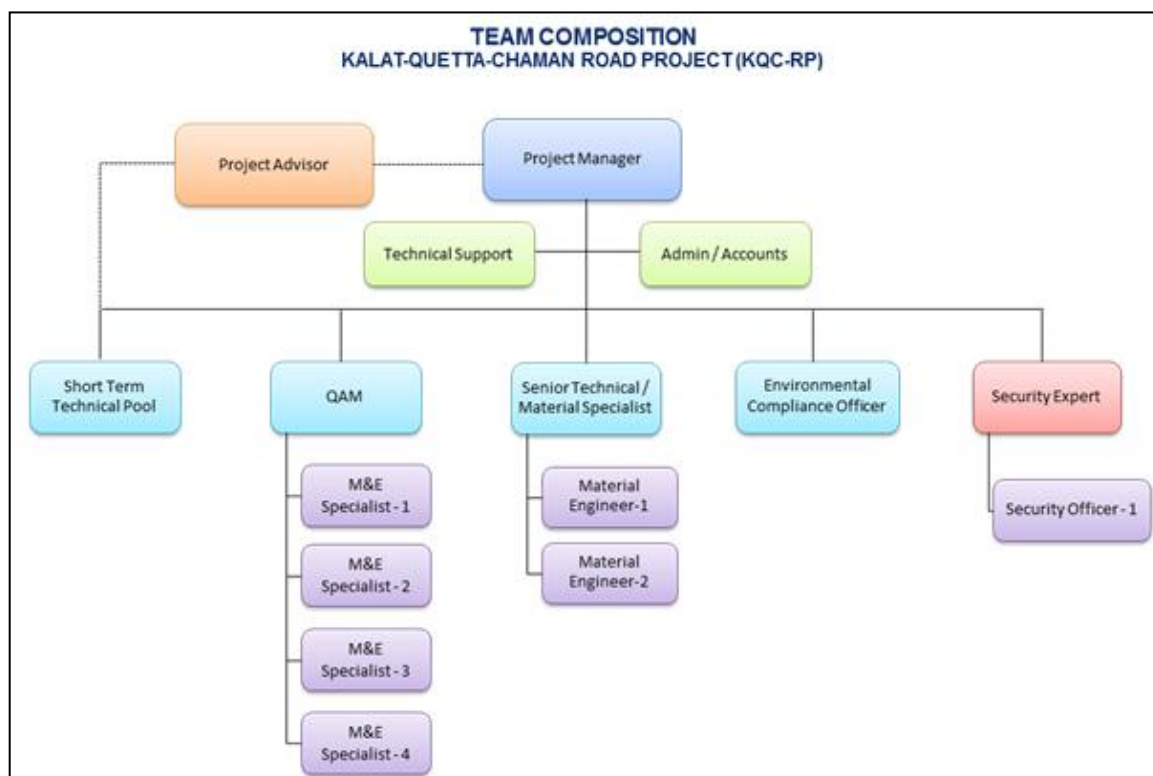
S. No	Name	Designation
1	SaleemRaza	Project Manager
2	Mohammad Aamer Khan	Provincial Coordinator
3	SaeedRehman	Quality Assurance Manager
4	Gul Muhammad Khoso	Environmental Compliance Officer
5	Qazi Amanullah	M&E Specialist
6	Muhammad KaleemNasir	M&E Specialist
7	Inayatullah Shah	Field Manager
8	Nadeem Amir	Office Engineer
8	SaqibSarwar	Field Manager
9	Muhammad Ashraf	Field Monitor
10	AbidIqbal	Field Monitor
11	Shahid Jan	Field Monitor
12	Naeem Jan	Senior Surveyor
13	AsadAyub	Auto Cad Operator
14	Capt. (R) Farid-ud-din	Security Expert / Advisor
15	Major (R) ShahidTanvir	Security Officer
16	ZahirGul	Manager Admin/ Finance
17	Syed Abdullah Shah	Accountant
18	MatloobHussain	Admin Officer
19	Muhammad Sohail	IT Officer
20	Mustafa Ali	Assistant Accountant
21	Fakhar Ahmad	Receptionist
22	Asmatullah	Admin Assistant
23	Muhammad Zahoor	Quantity Surveyor
24	Muhammad IrfanArshad	Computer Operator
25	Kamran Saddique	Computer Operator

LABORATORY STAFF

S. No.	Name	Designation
1	Masood Ahmed	Material Specialist
2	Aurangzeb	Material Engineer
3	Niaz Ahmed	Senior Lab Technician
4	AtherHussain	Senior Lab Technician
5	Muhammad Ajmal	Lab-Technician
6	Nadeem Ahmed	Lab Assistant
7	Muhammad Imran	Lab Assistant

PESHAWAR BASED STAFF

S. No.	Name	Designation	
1	Nasir-ul-Mulk	Project Advisor	Intermittent
2	Muhammad Ishaq	Technical Specialist Cat-1 (Chief Structure Engineer)	
3	Tahir Kamran	Senior Technical Specialist	Full time
4	Abid-ul-Haq	Quantity Surveyor	
5	Waqas Ali	Jr. CAD Operator	



ANNEXURE-II

ENVIRONMENTAL MONITORING REPORT

Environmental Monitoring

Environmental Compliance Officer:

Gul Mohammad Khoso

Dates of Visit:

8/11/2014, 13/11/2014,
17/11/2014 & 20/11/2014

Persons Consulted at Site:

Mr. Mohsin Khan, Environmental
Engineer FWO
Mr. Farooq Aziz Khan, Assistant
Manager FWO
Mr. Rafiq ur Rehman, Inspector EGC
Mr. Saqib Aziz Khan, Assistant
Manager FWO
Mr. Syed Azhar Hussin Shah, Assistant
Resident Engineer EGC
Mr. Safeer Ahmed, Site Supervisor
FWO
Mr. GhulamHyder, Surveyor EGC
Mr. Raza Mohammad, Supervisor
FWO
Mr. Javed Ahmed, Surveyor FWO

Work Status:

- Work in progress
- Work Stopped
- Work Completed

✓

Environmental Monitoring Check List for the Site

EMPR NO.02

November, 2014

<i>Activity</i>	<i>Observations</i>
Dismantling of existing rock	<p>The cutting of rock for widening of road was in progress along various locations in Khojak Pass section at Rd 90+675 and Rd 93 to 95 (refer to plates # 1 & 2). During the site visit, no significant adverse impact was observed during rock cutting process.</p> <p>However, FWO staff was advised to dispose of the waste at designated places.</p>
Operation of asphalt plant, crushing operations, waste management, storage of oil/diesel	<p>The asphalt plant at Shela Bagh was found emitting excessive dust (see plate # 3).</p> <p>The FWO Environmental Engineer was asked to arrange for installing emission control devices such as bag house filters or cyclone separators to minimize the dust pollution.</p>
Earth work operations	<p>Earth work operations continued for causeways and scarification of the road along Khojak Pass (refer to plate # 4).</p> <p>The sprinkling of water was carried out on the road. It was however observed that dusty section of Khojak Pass needs sprinkling of water to control the dust pollution (refer to Plate # 5). Moreover, FWO staff was advised to take care of the existing utility installations to avoid damages to the water, natural gas pipes and telephone cables especially during culverts and retaining walls construction. It was also suggested to the FWO staff that they should coordinate with concerned department's authorities for proper safeguarding the utility installations during construction activities. (One of the exposed natural gas pipe during construction of culvert at RD 96+615, Section-2 has been shown in plate # 6).</p>
Flood Protection	To protect road from flood, safety measures such as construction work of culverts, retaining walls in section – 2 and section – 4 was in progress. Moreover, side drains work in section – 4 was also found in progress from RD

	<p>59 to onward (Refer to plate #7).</p> <p>During the site visit, it was observed that waste from cutting of rock was found at downstream side and close to the opening of the culvert at RD 90+320 (See plate # 8). It may cause obstruction to the flow of water through the culvert and damage the road during rainfall.</p> <p>The FWO staff was directed to take immediate measures to remove the dumped waste from downstream of culvert and dispose it to safe place.</p>
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PICTORIAL ENVIRONMENTAL DATA SHEET



Plate#1 Dated: 17-11-2014 RD 90+675 Section-4, cutting of rock for widening of road in progress.



Plate#2 Dated: 17-11-2014 RD 90 + 680 Section-4, another view of cutting of rock for widening of road.



Plate#3 Dated: 13-11-2014 Section-4, the asphalt plant at Shela Bagh needs to be equipped with mission control devices.



Plate#4 Dated: 8-11-2014 RD 98 Section-4, earthwork excavation for causeway in progress .



Plate#5 Dated: 20-11-2014 RD 92+500 Section-4, dusty road in Khojak pass section needs to be sprinkled with water to control the dust pollution.



Plate#6 Dated: 8-11-2014 RD 96+615 The underground utility installations need proper relocation.



Plate#7 Dated: 8-11-2014 RD 59 +900 Section-4,
excavation for side drain in progress without
warning taps.



Plate#8 Dated: 13-11-2014 RD 90+320
Section-4, the excavated/cut material
has been disposed of to the nullah bed.

ANNEXURE-III

SECURITY REPORT

Security Situation

1. **General.** The Security Situation along Quetta- Kalat Axis and Quetta City remained a high risk whereas on Quetta-Chamman Axis it remained moderate risk in terms of AGES Staff operating. Suicidal Attack on apolitical figure, firing on Political Leaders, Target Killing and Attacks on Frontier Corps Vehicles have been increased and alarming. Taking the cognizance of prevailing Security Environment the visits to the Field areas have been carried out by AGES Technical/ Laboratory Staff by adopting all possible Security precautions and SOPs to avoid any untoward incident.

2. **Misc Incidents Occurred.**

a. **Quetta-Chamman Axis**

(1) On 02 Nov 2014, unknown miscreants blasted Improvised Explosive Devise near PTCL Exchange, Mall Road Chamman. No loss reported.

(2) On 11 Nov 2014, at about 1730 hrs, TTA persons blocked Quetta- Chamman Road In front of MoulviGhani Madrassa . They also blocked NATO Oil Tankers movingfrom Chamman to Quetta and stoned on them. The Levies reached the scene and rescued the tankers.

(3) On 20 Nov 2014, some unknown persons carried out fire with Small Arms in area By Pass Road Chamman. Resultantly one civilian named Muhammad Hassan got injured and evacuated to hospital.

(4) On 24 Nov 14, a bomb was planted by the Terrorist right in front of Headquarters Frontier Corps Chamman located on Quetta- Chamman Road. Fortunately it could not explode and later defused by the Bomb Disposal Squad.

b**Quetta- Kalat Axis**

(1) On 13 Nov 14, Two persons (Father and Son named UsmanLango and Saddam Lango) were killed near Mangocher by unknown Motorcyclist.

(2) On 13 Nov 14, 04x Rockets were fired on Frontier Corps Camp in Mastung. No loss reported.

(3) On 20 Nov 14, a planted Bomb exploded on Railway Track near Spezend resultantly 08xBogeis of Akbar Bughti Express derailed. No major loss reported.

(4) On 22 Nov 2014, at about 2030 hrs, 04x unknown miscreants looted Al-Zubair Coach on Quetta- Kalat Road.

c. **Quetta City**

- 1) On 11 Nov 14, One Child Killed While 01x DSP, 04x Policemen and 03x Ladies sustained injuries in a Car Explosion. The Car Bomb was planted to kill a Civil Judge belonging to Terrorist Court.
- 2) On 2 Nov 14, Two unidentified Motorcyclist indiscriminately fired on shop keepers and killed 05x Persons on Usman Road Quetta.
- 3) On 22 Nov 14, Two Motor cyclists fired on the Convoy of Mr Abdul Kabir a Member of National Party, resultantly two person named Moulvi Aziz Ullah and Shah Jehan(A Sub Contractor of FWO) sustained serious injuries. The incident occurred near Sheikh Zayed Hospital.
- 4) On 22 Nov 2014, unknown miscreants planted a bomb in a Cycle on Saryab Road and exploded it once two Frontier Corps Vehicles reached near it. One person sustained injuries and evacuated to the hospital.

3. **Advisory Issued to KQC (RP) Employees.** The Technical and Supporting Staff have been stress upon following:

- a. All Staff to avoid unnecessary movement to City, Saryab Road, Hazargunji and Satellite Town unless avoidable.
- b. While going to the Field Areas the Staff must wear clothes which merge with the local Population and remain in low profile.
- c. Avoid routine movement of vehicles and time of move. The vehicles detailed for the field must be rotated frequently.
- d. Visit schedule to be kept confidential and must not be discussed with any unauthorized person. The Principle of “Need to Know” is strictly adopted.
- e. The Security Staff must charge their weapons immediately and cover both flanks once Technical Staff disembark from the vehicles and are busy in monitoring process.
- f. In case a vehicle develops some fault, it should not be left alone rather one Security Guard will always be deputed with the driver and Security Officer informed accordingly.

ANNEXURE-IV

MINUTES OF MEETING

MINUTES OF MEETING

Date: 27.11.2014

Venue: AGES Office Quetta

Meeting was held on 27th November, 2014 in the office of AGES at Quetta.

PARTICIPANTS

1.Mr. Saleem Raza	PM KQC Project (AGES)
2.Mr. Tahir Kamran	S. Tech: Specialist (AGES)
3.Mr. Mohammad Ishaq	Technical Specialist Cat-1, Chief Structure Engineer (AGES)
4.Mr.Saeed Rehman	QAM KQC Project (AGES)
5.Mr. Hassan Abbas	PM KQC Project (FWO)
6.Mr. Ghulam Sarwar	PM KQC Project (EGC)
7.Mr. Qazi Ammanullah	M&E Expert (AGES)
8.Mr. Kaleem Nasir	M&E Expert (AGES)
9.Mr. Gul Mohammad Khosa	ECO (AGES)
10. Mr. Masood Ahmed	Material Specialist (AGES)
11. Mr. Nadeem Aamir	Office Engineer (AGES)
12. Mr. Mohammad Akmal	CQS FWO
13. Mr. Saqib Ali Khan	AM FWO
14. Mr. Farooq Aziz Khan	DPM FWO

AGENDA

- Field activities review.
- Any other important point.

PROCEEDINGS

- Meeting started with recitation from the Holy Quran. After recitation, Project Manager welcomed the participants and shared overview of ongoing monitoring activities with the participants.
- Mr. Tahir Kamran Senior Technical Specialist AGES informed the house that in response to the several observations raised by AGES project team, a visit was planned by AGES head office team to verify the situation.
- Col Hassan Abbas PM FWO raised the question about mechanism behind the finalization of Milestones, Mr. Tahir Kamran responded that all the mechanism and process involved in finalization of Milestone for each activity was discussed in detail with USAID before it came to final shape. It was also discussed in the meeting that execution of physical works was not as per sequence given in Milestones.
- It was discussed in detail that design/drawings for km 107+775 to Km116+424 be shared by NHA with AGES.

- AGES Team shared with Mr. Ishaq their views with PM FWO regarding Multi Cell Culvert at Km 68+450 expressing that there is a technical problem in Multi Cell Culverts design. A gap to be filled by earth has been provided between three cells on either side would cause obstruction to water flow result in damages to the road. Another Multi cell Culverts at Km.68+950 has the same problem. The matter brought to the notice of EGC for corrective measures.
- Mr. Gul Hassan Khoso (ECO) informed the house that there are a lot of improvements in environmental compliance but there is still room for improvement which needs more attention.
- Col Hassan Abbas of FWO responded that in negotiation with SGS, an environmental agency to full fill the environmental issues.
- It was also stressed by AGES team that there is a need of developing a mechanism of sharing work plan of ongoing activities on weekly/fortnightly basis construction program, so that AGES team could manage monitoring of the project more effectively.

DECISIONS

- Awaited design/Drawings of different structure components of the road will soon be finalized by EGC and will convey through NHA for review and validation by AGES.
- The FWO will share the new approved design of causeways through NHA to AGES for review and validation.
- The FWO will share all approved design /Data including extension of culverts, locations and design of village road ramps through NHA to AGES for review and validation.
- FWO and EGC will involve the AGES right from initial stage of a new design for quick review and validation.
- The Contractor FWO will share the weekly/fortnightly construction program so that AGES team could manage monitoring of the Project more effectively.

PM was grateful to the participants for their input which would prove beneficial and meeting ended with thanks from the Chair.

Project Photographs

Khadkocha to Quetta (Section – 2)



Fixing of Kurb Stones at Km 110+00&Km 111+00
in Progress



Excavation of Pipe Culvert at km 78+900 in
Progress



Construction of Retaining Wall at km 98+032
to km 98+044 in progress



DST on shoulders at Km 81+00 in progress

Jangle Piralizai to Chaman (Section – 4)



AGES staff checking the spacing of steel (slab of builtup drain) at Km 61+450



Ages staff checking the level of ACBC with straightedge at Km 87+072



Ages staff monitoring slump at km 72+580



Bed preparation for causeway in progress at Km 96+557



Bed preparation of Builtup drain at Km 72+575



Brick masonry retaining wall in progress at Km 87+225.



Builtup drain in progress at Km 60+025



Compaction of sub base in progress at Km 89+075



FDT on drain bed at Km 72+575



Cutting of ACBC at Km 87+072 in progress



Lean concrete of causeway in progress at Km 96+180



View of prime coat on ABC(shoulders) at Km 80+582



Sprinkling of water on ABC (shoulders) in progress at
Km 75+520



Sub base screening at source



Builtup drain at Km 59+950



Battery cell culvert at km 68 + 450

Lab Pictorial Data



AGES Lab Staff conducting F.D.T bed of Culvert
(Section-2)



AGES Lab Staff taking Core Samples of
ACWC at Km 66+007 (Section-2)



AGES Lab Staff checking Core Thickness of ACBC at
Km 66+700 (Section-2)



AGES Lab Staff taking Cores of ACWC at Km
67+200 (Section-2)



AGES Lab Staff checking Core thickness of ACWC at
Km 67+200 (Section-2)



AGES Lab Quetta



Bitumen extraction test at AGES lab



Concrete Cylinder crushing test at AGES lab



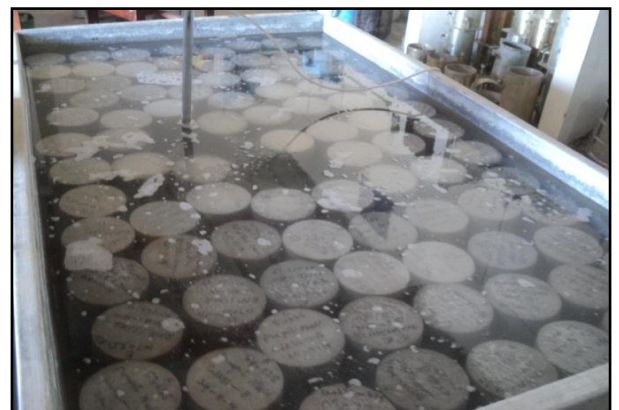
Capping in progress at Shela Bagh lab(FWO)



Concrete Cylinder crushing at
Shela Bagh Lab



Cylinder Casting is in progress



curing of cylinders at Shela Bagh lab



Temperature Checking of ACBC at km 2+850



FDT of ABC (shoulders) at km 80+400



Cylinders capped and ready for crushing
at Shela Bagh lab



Checking of concrete temperature on
Causeway at km 96+180